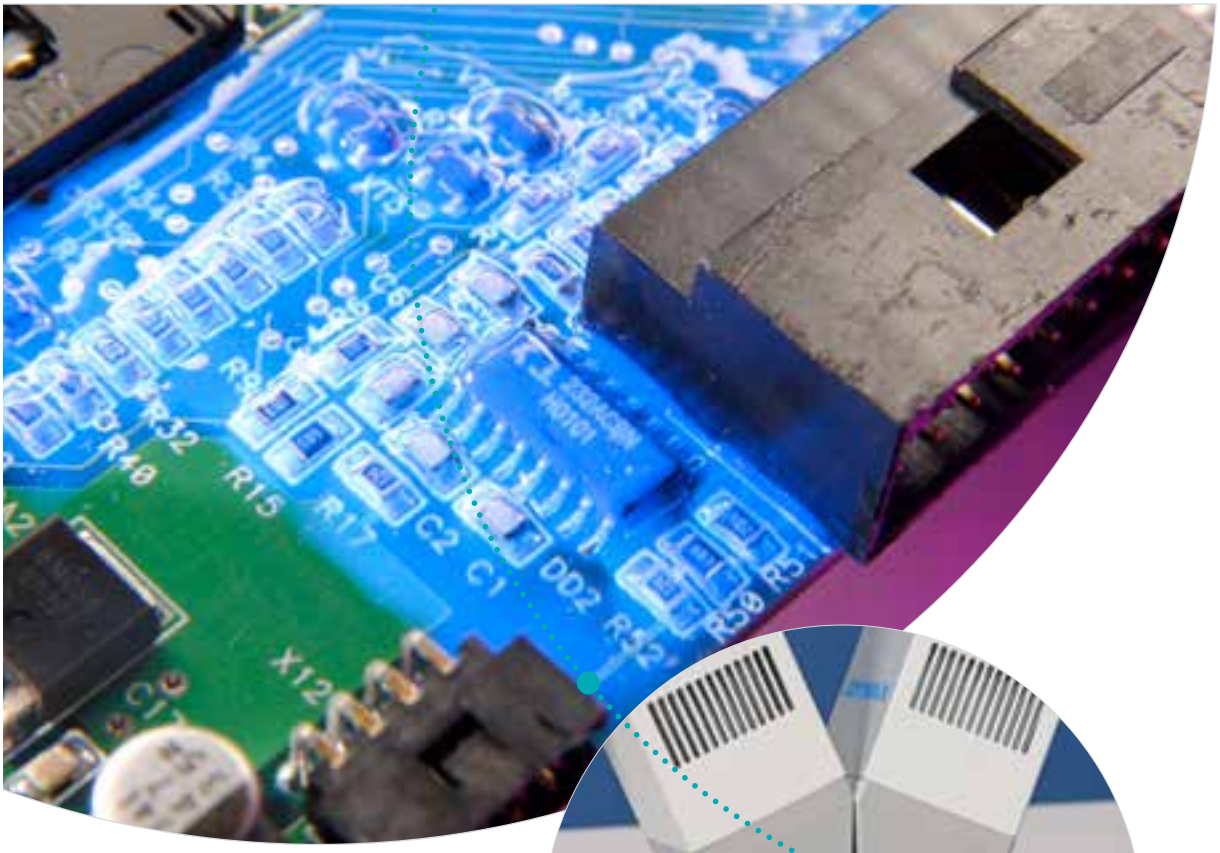
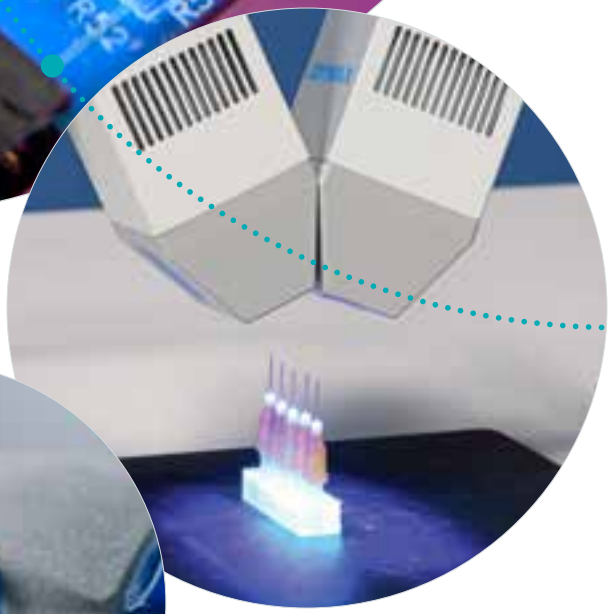
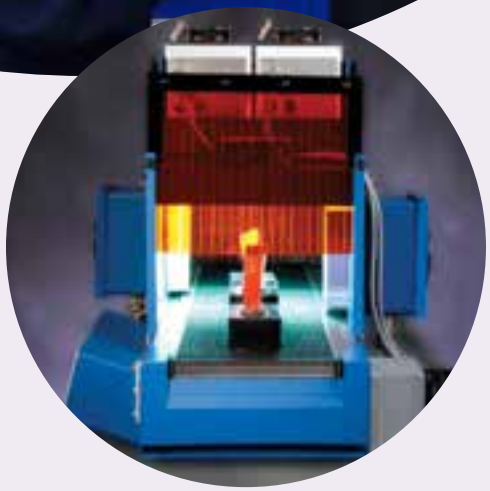




DYMAX ASIA

PRODUCT SELECTOR GUIDE

DYMAX®



Dymax Corporation, originally founded in 1980 as the American Chemical and Engineering Company, is a leading manufacturer of advanced light-curable adhesives, coatings, oligomers, light-curing equipment, and fluid dispense systems. We provide design engineers with the products and services they need to dramatically improve manufacturing efficiency and lower costs.

Our Mission: We make our customers more capable and efficient. Dymax solutions maximize capability and efficiency by increasing throughput, enhancing quality and performance, conserving energy, improving safety and reducing environmental impact.

Dymax serves the needs of OEMs in the medical, electronics, optical, aerospace, automotive, appliance, metal finishing, and alternative energy markets. We sell our products directly and through a worldwide network of distributors and sales partners. Primary light-curable products include adhesives, coatings, encapsulants, gasketing resins, masking materials, and potting compounds.

We also manufacture a variety of conventional arc-bulb and LED light-curing equipment including spot lamps, flood lamps, conveyors, and radiometers. Automated and manual dispense systems are available for all types of low-to-medium viscosity fluid dispensing. Oligomers include multifunctional acrylates, polyether urethane acrylates and methacrylates, and polyester urethane acrylates and methacrylates.

Dymax employs more than 500 people worldwide and owns over 30 technology patents. Our corporate headquarters are in Torrington, Connecticut with additional facilities in Mexico, Germany, China, Hong Kong, Korea, and Singapore.

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ADHESIVES FOR MEDICAL DEVICE ASSEMBLY

Multipurpose Adhesives

Dymax 1000-series adhesives contain no added solvents and cure within seconds upon exposure to UV and visible light, permitting bonding of UV-inhibited and tinted plastics. Many 1000-series adhesives are formulated with patented Dymax fluorescing technology, causing them to glow brightly when exposed to a low-intensity "black light". This technology enhances the functionality of automated vision equipment for high-speed, high-volume production.

Product	Unique Product Feature	Recommended Substrates	Viscosity, cP	Rheology	Durometer Hardness	Tensile Break, MPa [psi]	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Fluorescing*
1040-M	Autoclave Resistant Material for Bonding, Potting, & Encapsulating	ABS, PCTG, PMMA, SS	750	Newtonian	D60	18.6 [2,700]	8	668.8 [97,000]	No
1072-M-Z	Flexible, Moisture-Resistant Plastic Bonder	COC, COP, ABS, PC, PMMA, PVC	1,075	Newtonian	A70	3 [440]	540	10.3 [1,500]	No
1128A-M-Z	Impact-Resistant Adhesive with Secondary Heat Cure	SS, AL, NiTi, ABS, PC, PMMA, GL	650	Newtonian	D80	30 [4,300]	11	1,530 [222,000]	Blue
1162-M-Z	Blue Fluorescing Plastic & Metal Bonder	ABS, PC, PVC, SS	200	Newtonian	D75	11 [1,600]	110	958.4 [139,000]	Blue
1172-M-UR-Z	Flexible Plastic Bonder with Ultra-Red Technology	COC, COP, PS, PU, PVC	1,050	Newtonian	D25	3 [430]	525	6.6 [960]	Ultra-Red®
1181-M	Blue Fluorescing Adhesive for Plastics and Metals	ABS, PC, PCTG, PS, SS	5,750	Newtonian	D80	56 [8,100]	17	900 [130,000]	Blue
1202-M-SC	Flexible Adhesive; See-Cure Technology	ABS, PC, PCTG, PETG, PVC	200	Newtonian	D55	11 [1,600]	230	100 [15,000]	No
1209-M-UR-SC-Z	Self-Leveling Adhesive; Encompass® Technology	SEBS, PVC, PC, ABS	1,750	Newtonian	D73	12.4 [1,800]	145	490 [71,200]	Ultra-Red®
1405M-T-UR-SC-Z	Adhesive for Plastics & Metal; Encompass Technology	ABS, PC, PCTG, PETG, PMMA, SAN	8,500	Thixotropic	D75	20 [2,900]	160	855 [124,000]	Ultra-Red
1120-M-UR	LED UV Curable Plastic Bonder with Ultra-Red® Fluorescing	ABS, PC, PVC, SAN	250	Newtonian	D70	12 [1,800]	22	151 [22,000]	Ultra-Red®
1121-M	LED UV Curable, Blue Fluorescing Plastic Bonder	ABS, PC, PU, PVC, BPA-Free Copolyester	450	Newtonian	D65	15.8 [2,300]	225	175.8 [25,500]	Blue
1128A-M-VT	Adhesive for Plastics & Metal with Secondary Heat Cure	SS, AL, NiTi, PC, PMMA, GL	11,000	Thixotropic	D75	33 [4,800]	3.4	621 [90,100]	Blue
1161-M	Multi-Purpose Plastic & Metal Bonder	ABS, PC, PCTG, SAN, TPU, SS	300	Newtonian	D70	17 [2,500]	120	300 [44,000]	Blue
1180-M-T	Flexible, General Purpose Adhesive	SS, PC, PS, PU, PVC, ABS	6,000	Thixotropic	D70	19 [28,000]	70	413 [60,000]	Blue
1187-M-GEL	Flexible, Moisture-Resistant Plastic Bonder	PC, PU, PVC, TPU	24,000	Thixotropic	D50	16 [2,400]	200	64 [9,400]	Blue
1187-M-SV01	Flexible, Moisture-Resistant Plastic Bonder	ABS, PC, PU, PVC	6,500	Thixotropic	D55	17 [2,400]	170	170 [25,000]	Blue
1204-M-SC	Flexible, Low Shrinkage Bonder; See-Cure Technology	PCTG, PETG, PVC	12,000	Newtonian	A65	4 [600]	270	3 [370]	No

Featured Product

* U.S. Patents 6,080,450 & 7,892,386

SC See-Cure (Patented Color-Change Technology)

UR Ultra-Red® (Patented Fluorescing Technology)

VT Very Thick

SV Special Viscosity

T Thick

Z TPO Free

Substrate Bonding Guide

Many Dymax 1000-series adhesives are ISO 10993 approved. They are ideal for bonding a wide variety of substrates found in reservoirs and housings, respiratory devices, needles and syringes, transducers, tube sets and fittings, wearable devices, and other medical disposables.

PRODUCT	ABS acrylonitrile-butadiene-styrene	CAP cellulose acetate propionate	COP/COC cyclo olefin polymer/copolymer: Tritan	GL glass: borosilicate, quartz, mica	NiTi nickel titanium	PA polyamide	PC polycarbonate	PEBA polyether block amide	PEEK polyetherether-ketone	PEI polyetherimide	PET poly(ethylene terephthalate)	PETG poly(ethylene terephthalate)glycol	PI polyimide	PMMA poly(methyl methacrylate)	PP polypropylene	PS polystyrene	PSU polysulfone	PU polyurethane	PVC poly(vinyl chloride)	SAN styrene-acrylonitrile	TPU thermoplastic polyurethane	SS stainless steel
1040-M	•	❍		•			•						❍	•		•				•	❍	
1072-M-Z	•		•	❍		•	•	•		•	•	•	❍	•		•	•	❍	•	•	•	•
1128A-M-Z	•			•	•	❍	•	❍		•				•		•	❍	•		•		•
1162-M-Z	•			•			•				•				❍	•			•			•
1172-M-UR-Z	•		•	•		•	•	•		❍	•	•	•	•		•	•	•	•	•	•	•
1181-M	•						•			•						•		❍	•	•		•
1202-M-SC	•					❍	•	❍	•	❍	❍	•		•		•		❍	•		❍	•
1209-M-UR-SC-Z	•						•			•		•				•			•	•	•	
1405M-T-UR-SC-Z	•					❍	•			•	•	•	❍	•		•		•	❍	•	❍	•
1120-M-UR	•	•					•												•	•		
1121-M	•						•		❍	❍	❍	•		•		❍		•	•	•	•	
1128A-M-VT	•			•	•	❍	•	❍		•				•		•	❍	•		•		•
1161-M	•	•				❍	•				•	•	❍	•	❍	•		❍	❍	•	•	•
1180-M-T	•			•		•	•			•		•				•		•	•	•		❍
1187-M-GEL	•						•				❍	❍				•		•	•	•	•	
1187-M-SV01	•						•				•			❍		•		•	•			
1204-M-SC	•						•			❍	•	•	•	❍		❍	•	❍	•	•	❍	

- • Recommended adhesive
- ❍ Limited applications
- **ST** Requires surface treatment (e.g., plasma, corona treatment, etc.)

Individual Product Data Sheets (PDS) list complete test data, with copies of test reports available upon request.

Adhesives for Catheter Assembly

These single-component adhesives provide excellent adhesion, a high degree of flexibility, and fast light cures for consistent, low stress catheter assembly. CTH products also provide excellent moisture and humidity resistance and are available with patented fluorescing technology, making in-line inspection easy.

Product	Unique Product Feature	Recommended Substrates	Viscosity, cP	Rheology	Durometer Hardness	Tensile Break, MPa [psi]	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Fluorescing*
203A-CTH-F	Catheter & Guidewire Adhesive with Secondary Heat-Cure Capability	SS, NiTi, ABS, PC, PU	600	Newtonian	D80	30 [4,300]	13	640 [93,000]	Blue
204-CTH-F-Z	Flexible Adhesive	PC, PVC, PU, ABS, PET, PEBA	600	Newtonian	D58	15.2 [2,200]	194	282.7 [41,000]	Blue
209-CTH	Multipurpose Adhesive for Plastics & Metals	PC, PCTG, PET, NiTi	300	Newtonian	D70	17 [2,500]	120	300 [44,000]	Blue
211-CTH-SC-Z	LED UV Curable Adhesive; See-Cure Technology	ABS, PC, PU, PVC	400	Newtonian	D70	14 [2,050]	124	680 [98,000]	No
215-CTH-SV01-UR-SC	LED UV Curable; Excellent Adhesion to Nylon 12 & PEBA; Encompass Technology	PA, PEBA, PET, TPU	1,100	Thixotropic	D53	11.7 [1,700]	300	410 [60,000]	Ultra-Red®
203A-CTH-F-T	Catheter & Guidewire Adhesive with Secondary Heat-Cure Capability	SS, NiTi, PC, ABS, PU	3,250	Thixotropic	D80	26 [3,800]	2.6	630 [92,000]	Blue
203A-CTH-F-VT		SS, NiTi, PC, ABS, PU	11,000	Thixotropic	D80	28 [4,100]	8	550 [80,000]	Blue
203-CTH-F-VLV		SS, NiTi, PC, ABS, PU	55	Thixotropic	D85	32 [4,600]	7	640 [93,000]	Blue
215-CTH-UR-SC	LED UV Curable; Excellent Adhesion to Nylon 12 & PEBA; Encompass Technology	PA, PEBA, PET, TPU	18,000	Thixotropic	D55	15.1 [2,200]	360	165 [24,000]	Ultra-Red®
215-CTH-LV-UR-SC		PA, PEBA, PET, TPU	350	Newtonian	D53	11 [1,600]	300	117 [17,000]	Ultra-Red®
215-CTH-T-UR-SC		PA, PEBA, PET, TPU	6,000	Thixotropic	D50	11.7 [1,700]	260	154 [22,400]	Ultra-Red®
250-CTH	UV and/or Heat Cure Cationic Epoxy; Extremely Low Shrinkage	ABS, PC, PETG, PS, PU, GL	52,500	Thixotropic	D90	51.7 [7,500]	2	1,425 [260,800]	No

SV Special Viscosity
T Thick
VT Very Thick
VLV Very Low Viscosity

Z TPO Free
SC See-Cure (Patented Color-Change Technology)
UR Ultra-Red® (Patented Fluorescing Technology)

Featured Product

* U.S. Patents 6,080,450 & 7,892,386

Substrate Bonding Guide

Dymax CTH-series adhesives are formulated to meet the unique assembly challenges associated with the newest catheter materials, including Nylon 12 and PEBA.

PRODUCT	ABS acrylonitrile-butadiene-styrene	CAP cellulose acetate propionate	PA polyamide (nylon 6/6)	PA polyamide (nylon 12)	PC polycarbonate	PEBA polyether block amide	PEI polyetherimide	PET poly(ethylene terephthalate)	PETG poly(ethylene terephthalate)glycol	PI polyimide	PPO poly(phenylene oxide)	PS polystyrene	PSU polysulfone	PU polyurethane	PVC poly(vinyl chloride)	SAN styrene-acrylonitrile	SIL silicone	TPU thermoplastic polyurethane	NiTi nickel titanium	PL platinum	SS stainless steel
203A-CTH-F	•		❍		•	❍	•					•	❍	•		•			•		•
204-CTH-F-Z	•				•	❍		❍		•		•		•	•						
209-CTH	•	•	❍	❍	•	❍		•	•	❍		•		❍	❍	•			•		•
211-CTH-SC-Z	•	•	•		•							•		•	•	•		•	•		
215-CTH-SV01-UR-SC	•		•	•	•	•	•	•	•	❍	❍	•	•	•	•	❍		•			
203A-CTH-F-T	•		❍		•	❍	•					•	❍	•		•	Please contact Dymax Application Engineering for assistance.		•		•
203A-CTH-F-VT	•		❍		•	❍	•					•	❍	•		•			•		•
203-CTH-F-VLV	•		❍		•	❍	•					•	❍	•		•			•		•
215-CTH-UR-SC	•		•	•	•	•	•	•	•	❍	❍	•	•	•	•	❍		•			
215-CTH-LV-UR-SC	•		•	•	•	•	•	•	•	❍	❍	•	•	•	•	❍		•			
215-CTH-T-UR-SC	•		•	•	•	•	•	•	•	❍	❍	•	•	•	•	❍		•			
250-CTH	•	•	❍		•	❍	•	❍	•	❍		•		•	•	•					

- • Recommended adhesive
- ❍ Limited applications
- **ST** Requires surface treatment (e.g., plasma, corona treatment, etc.)

Individual Product Data Sheets (PDS) list complete test data, with copies of test reports available upon request.

Adhesives for Needle Assembly

Dymax MD® adhesives are ideal for automated high-speed needle assembly lines that incorporate immediate in-line testing and packaging. These single-component adhesives cure rapidly upon exposure to the proper combination of high-intensity visible and long wave UV light. The ability to cure with visible light allows for bonding of UV-blocking or heavily tinted plastics. Their fluorescing properties enhance the performance of automated sensing and vision systems, allow for easy detection of adhesive coverage and volume, and lead to higher production yields and improved quality assurance.

Product	Unique Product Feature	Recommended Substrates	Viscosity, cP	Rheology	Durometer Hardness	Tensile Break, MPa [psi]	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Fluorescing*
1045-M	LED UV Curable Adhesive for Prefilled Syringes & Injection Devices	ABS, Glass, PC, SS	475	Newtonian	D78	23.4 [3,400]	20	1861.6 [270,000]	No
1405M-T-UR-SC-Z	LED UV Curable Plastic & Metal Bonder; Encompass Technology	ABS, PC, PMMA, SAN, SS	8,500	Thixotropic	D75	20 [2,900]	160	855 [124,000]	Ultra-Red
1406-M-Z	LED UV Curable Adhesive for Small Gauge Needles	PP, PE, SS	160	Newtonian	D70	12 [1,760]	92	970 [141,000]	Blue
1401-M-UR	LED UV Curable Adhesive for High-Speed Needle Bonding	ABS, PC, PMMA, PS, SS	2,800	Thixotropic	D70	22 [3,300]	200	284 [41,300]	Ultra-Red
1404-M-UR	Low Wicking, LED UV Curable Plastic & Metal Bonder	PC, PS, SS	6,000	Thixotropic	D65	23 [3,400]	150	447 [65,000]	Ultra-Red
1405-M-UR-SC-Z	LED UV Curable Plastic & Metal Bonder; Encompass Technology	ABS, PC, PMMA, SAN, SS	160	Newtonian	D70	12 [1,760]	110	750 [109,000]	Ultra-Red
1501-M-UR	LED UV Curable Bonder for Lightly Colored, Opaque, or Translucent Substrates	ABS, PC, SAN, SS	275	Newtonian	D75	17.9 [2,600]	80	427.5 [62,000]	Ultra-Red

T Thick

Z TPO Free

SC See-Cure (Patented Color-Change Technology)

UR Ultra-Red® (Patented Fluorescing Technology)

Featured Product

* U.S. Patents 6,080,450 & 7,892,386

Substrate Bonding Guide

Many MD® needle-bonding adhesives are ISO 10993 approved. Typical applications include bonding cannulas to hubs in various hypodermic and biopsy needles, syringes, and winged infusion sets made from multiple plastics, metals, and glass.

PRODUCT	**ABS** acrylonitrile-butadiene-styrene	**PC** polycarbonate	**PE polyethylene**	**PMMA** poly(methyl methacrylate)	**PP** polypropylene	PS polystyrene	PU polyurethane	**GL** glass: borosillicate, quartz, mica	**SS** stainless steel
1045-M	•	•		❍			•	•	•
1405M-T-UR-SC-Z	•	•		•	ST	•	•		•
1406-M-Z	•	•	•	❍	ST	•			•
1401-M-UR	•	•		•	ST	•		❍	•
1404-M-UR	•	•		❍	ST	•			•
1405-M-UR-SC-Z	•	•		•	ST	•	•		•
1501-M-UR	•	•			ST				•

- • Recommended adhesive
- ❍ Limited applications
- **ST** Requires surface treatment (e.g., plasma, corona treatment, etc.)

Individual Product Data Sheets (PDS) list complete test data, with copies of test reports available upon request.

Adhesives for Respiratory Devices

Product	Unique Product Feature	Recommended Substrates	Viscosity, cP	Rheology	Durometer Hardness	Tensile Break, MPa [psi]	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Fluorescing*
108-MSK	Fast, Tack-Free Adhesive	PC, PS, PVC, SAN	600	Newtonian	D75	25 [3,700]	70	388 [56,400]	Blue
104-MSK-GEL	Flexible, General Purpose Adhesive	PCTG, PETG, PU, PVC, SAN	23,500	Thixotropic	D60	19 [2,750]	205	147 [21,370]	No
111-MSK	Flexible, Moisture-Resistant Adhesive	ABS, PC, PS, PU, PVC, SEBS	250	Newtonian	D55	6.9 [1,000]	400	99 [14,500]	Blue

Materials for Medical Electronics

Product	Unique Product Feature	Recommended Substrates	Viscosity, cP	Rheology	Durometer Hardness	Tensile Break, MPa [psi]	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Fluorescing*
1072-M-Z	Flexible, Moisture-Resistant Plastic Bonder	COC, COP, ABS, PC, PMMA, PVC	1,075	Newtonian	A70	3 [440]	540	10.3 [1,500]	No
1172-M-UR-Z	Flexible Plastic Bonder with Ultra-Red Technology	COC, COP, PS, PU, PVC	1,050	Newtonian	D25	3 [430]	525	6.6 [960]	Ultra-Red®
1181-M	Fast, LED-Curable Adhesive for Bonding & Potting	ABS, PC, PCTG, PS, SS	5,750	Newtonian	D80	56 [8,100]	17	900 [130,000]	Blue
1184-M-B	Blue-Black, Low Gloss Conformal Coating with Secondary Heat-Cure	PI, PS, SAN, PCB	6,000	Thixotropic	D80	55 [8,000]	7	840 [122,000]	No
1184-M-T-R	Red Adhesive with Secondary Heat Cure	PI, PS, SAN, PCB	4,000	Thixotropic	D80	60 [8,600]	5	970 [140,000]	No
1901-M	LED UV Curable Coating with Secondary Heat-Cure	Flexible PCB, Rigid PCB	3,000	Newtonian	A67	2 [290]	45	3 [480]	No

B Blue
R Red
T Thick
Z TPO Free
UR Ultra-Red® (Patented Fluorescing Technology)
Featured Product
* U.S. Patents 6,080,450 & 7,892,386

Substrate Bonding Guide

PRODUCT	ABS acrylonitrile-butadiene-styrene	PC polycarbonate	PET poly(ethylene terephthalate)	PETG poly(ethylene terephthalate)glycol	PI polyimide	PMMA poly(methyl methacrylate)	PS polystyrene	PU polyurethane	PVC poly(vinyl chloride)	SAN styrene-acrylonitrile	SEBS styrene-ethylene/butylene-styrene	Silicone (platinum cured)
108-MSK	❍	●		●		●	●	●	●	●		Please contact Dymax Application Engineering for assistance.
104-MSK-GEL		●	❍	●	❍		❍	●	●	●		
111-MSK	●	●				●	●	●	●		●	

Substrate Bonding Guide

PRODUCT	ABS acrylonitrile-butadiene-styrene	COP/COC cyclo olefin polymer/copolymer	GL glass: borosillicate, quartz, mica	PA polyamide	PC polycarbonate	PEBA polyether block amide	PEI polyetherimide	PET poly(ethylene terephthalate)	PETG poly(ethylene terephthalate)glycol	PI polyimide	PMMA poly(methyl methacrylate)	PS polystyrene	PSU polysulfone	PU polyurethane	PVC poly(vinyl chloride)	SAN styrene-acrylonitrile	TPU thermoplastic polyurethane	SS stainless steel	PCB printed circuit board
1072-M-Z	●	●	❍	●	●	●	●	●	●	❍	●	●	●	❍	●	●	●	●	
1172-M-UR-Z	●	●	●	●	●	●	❍	●	●	●	●	●	●	●	●	●	●	●	
1181-M	●				●		●					●		❍	●	●		●	
1184-M-B	●		❍	●	●		●	●		●	●	●			●	●	●	●	●
1184-M-T-R	●		❍	●	●		●	●		●	●	●			●	●	●	●	●
1901-M				❍					❍			●			❍		●		●

● Recommended adhesive ❍ Limited applications

ST Requires surface treatment (e.g., plasma, corona treatment, etc.)

Individual Product Data Sheets (PDS) list complete test data, with copies of test reports available upon request.

Maskants for Orthopaedics & Surgical Tools

SpeedMask® light-curable maskants provide superior surface protection of orthopaedic implants, surgical instruments, and medical devices during aggressive surface finishing processes. They cure in seconds upon exposure to UV/broad-spectrum light and replace traditional masking materials such as tapes, lacquers, waxes, boots, and caps. SpeedMask® maskants are easily applied by syringe or through dipping, spraying, or screen printing, and are available in peelable or burn-off grades that leave component surfaces residue free.

Product	Unique Product Feature	Viscosity, cP	Rheology	Durometer Hardness	Tensile Break, MPa [psi]	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	10993-5 Cytotoxicity Approved	Fluorescing*
726-SC	Heat-Resistant Maskant with See-Cure Technology	52,000	Thixotropic	D40	6.8 [980]	160	3.9 [560]	Yes	No
730-BT	Chemical-Resistant Blue Mask	22,000	Thixotropic	D35	4.8 [700]	300	3.4 [500]	Yes	No
750	Pink, Heat-Resistant Mask	30,000	Thixotropic	A50	3.6 [530]	140	2.5 [370]	Yes	No
750-SC	Heat-Resistant Mask with See-Cure Technology	30,000	Thixotropic	A85	4.5 [659]	124	29 [4,250]	Yes	No
7602	Blue Fluorescing Mask with Color Change on Cure	26,000	Thixotropic	A76	6 [872]	185	60.4 [8,757]	Yes	Blue
724	Easy Peel Surface Treatment Mask	70,000	Thixotropic	D40	5.4 [780]	200	2.7 [390]	Yes	No
728-G	High-Visibility Green Mask	25,000	Thixotropic	D55	15.5 [2,242]	265	55 [8,024]	Yes	No
731-REV-A	Trimmable, Yellow Fluorescing Mask	18,000	Thixotropic	D55	20 [2,950]	300	28 [4,200]	Yes	Yellow
733-G-REV-A	High-Visibility Green Mask	25,000	Thixotropic	D50	22.3 [3,238]	294	193 [27,960]	Yes	No
734-BT	Chemical-Resistant Blue Mask	24,000	Thixotropic	D25	5 [731]	235	35 [5,044]	Yes	No

G Green

BT Blue

SC See-Cure (Patented Color-Change Technology)

Featured Product

* U.S. Patents 6,080,450 & 7,892,386

Process Guide

SpeedMask® maskants provide excellent surface protection during aggressive finishing processes including sand blasting, acid stripping, anodizing, machining, and more.

		Chemical Processes			Coatings			Media Finishing			Manufacturing Aids		
Product	Removal Options	Anodizing	Plating	Acid Stripping	Air Plasma Spray	Painting & Powder Coatings	Thermal Barrier Coatings	Grit Blasting	Shot Peening	Vibratory Finishing	Machining	Buffing/Polishing	Laser Drilling
726-SC	Peelable		●		●	●		●	●				
730-BT	Peelable or Incineration	●	●					●	●				
750	Peelable or Incineration				●			●		●	●		
750-SC	Peelable or Incineration	●	●		●			●					
7602	Peelable or Incineration	●	●	●				●					
724	Incineration					●		●	●				
728-G	Peelable or Incineration		●	●				●	●	●	●	●	
731-REV-A	Peelable or Incineration	●	●				●	●	●	●			
733-G-REV-A	Peelable or Incineration				●		●	●	●				
734-BT	Peelable or Incineration	●	●	●	●			●	●	●		●	

● Recommended adhesive

❍ Limited applications

Individual Product Data Sheets (PDS) list complete test data, with copies of test reports available upon request.

Materials for Wearable Medical Device Assembly

Product	Features	Cure Mechanism	Nominal Viscosity, cP	Durometer Hardness	Water Absorption, % (25°C, 24h)	Tensile at Break, MPa [psi]	Modulus of Elasticity, MPa [psi]	10993 Cytotoxicity	10993 Irritation	10993 Sensitization	Formulated Without IBOA	Formulated Without TPO
2022-MW	Ideal for general bonding, encapsulation, and coating; low water absorption	UV broad spectrum; UV LED 365 nm	750	D60	0.5	19.3 [2,80]	620.5 [90,000]	•	•	•	•	•
2101-MW-UR	Ideal for general bonding of medical wearables; adhesion to a variety of substrates including PC, PVC, TPU; Ultra-Red® fluorescing	UV broad spectrum; UV LED 405 nm	5,500	D77	2.1	24.8 [3,600]	1,020.4 [148,000]	•	•	•	•	•
2103-MW-UR	Ideal for general bonding; moisture resistant; adhesion to a variety of substrates including PC, PVC, TPU; Ultra-Red® fluorescing	UV broad spectrum; UV LED 405 nm	5,500	D70	0.1	13.8 [2,000]	448.2 [65,000]	•	•	•	•	•
1172-M-UR-Z	Ideal for general bonding; low water absorption; Ultra-Red® fluorescing	UV broad spectrum; UV LED 385 nm	1,050	D25	1.1	3 [430]	6.6 [960]	*				•
1405M-T-UR-SC-Z	Ideal for general bonding, encapsulation, and coating; Encompass® technology - See-Cure color change technology with Ultra-Red® fluorescing	UV broad spectrum; UV LED 385 & 405 nm	8,500	D75	2.6	20 [2,900]	855 [124,000]	*	*			•
1901-M	Ideal for encapsulation and coating; low water absorption; flame retardant (meets UL 94 V-0); repairable; suitable for both flexible and rigid substrates	UV broad spectrum; UV LED 385 nm; Heat cure	3,000	A67	1.5	2 [290]	3 [480]	•				

SC See-Cure (Patented Color-Change Technology) **UR** Ultra-Red® (Patented Fluorescing Technology) **T** Thick * Pending

Continuous Glucose Monitor (CGM)

Substrate Bonding Guide

Product	ABS acrylonitrile-butadiene-styrene	CAP cellulose acetate propionate	COC/COP cyclo olefin copolymer	PA polyamide	PC polycarbonate	PCTG poly(cyclohexylene dimethylene terephthalate)glycol	PEBA polyether block amide	PEEK polyetheretherketone	PEI polyetherimide	PET poly(ethylene terephthalate)	PETG poly(ethylene terephthalate) glycol	PI polyimide	PMMA poly(methyl methacrylate)	PPO poly(phenylene oxide)	PS polystyrene	PSU polysulfone	PU polyurethane	PVC poly(vinyl chloride)	SAN styrene-acrylonitrile	TPU thermoplastic polyurethane	CER ceramic	GL glass: borosilicate, quartz, mica	FR4 glass-reinforced epoxy resin laminate	AL aluminum	BR brass	CRS cold rolled steel	CU copper	Ni-Plated SS	SS stainless steel	PCB printed circuit board
2022-MW	●	❍			●	●						❍	●	●	❍				●	❍		●		●	●				●	
2101-MW-UR	●				●	●			❍		●				❍			●	●	●		❍	❍							
2103-MW-UR	●				●		❍								●			●		●									●	
1172-M-UR-Z	●		●	●	●	●	●		●	●	●	❍	●		●	●	❍	●	●	●	●	❍		●					●	
1405M-T-UR-SC-Z	●			❍	●	●			●	●	●	❍	●	●	●	●	●	●	●	●				❍					●	●
1901-M		●		❍							❍				●			❍		●										●

● Recommended adhesive

❍ Limited applications

ST Requires surface treatment (e.g., plasma, corona treatment, etc.)

Individual Product Data Sheets (PDS) list complete test data, with copies of test reports available upon request.

Applicable Devices

- Medical smart monitoring devices
- Patient monitoring devices
- Large volume injectors
- Vital sign monitoring devices
- Hearing aids
- Continuous glucose monitors
- Diabetes care devices
- Pain management devices
- Sleep monitoring devices

HLC® Adhesives

Patented Hybrid Light-Curable Materials with On-Contact Dark Area Cure Capability

Dymax hybrid light-curable technology is a revolutionary new adhesive platform that combines the best attributes of anionic and free radical chemistries into one. HLC adhesives exhibit the exceptional physical and performance properties of Dymax standard light-curable materials and the rapid on-contact cure of anionics. The incorporation of contact curing allows these materials to be used with a larger range of substrates and provides curing in dark areas not reachable by light.

HLC adhesives are ideal for medical assemblies where dark areas are a concern, including bonding applications on catheters, tube sets, diagnostic and therapeutic devices, auto-injectors, and endoscopes.

Key Attributes

- Fast, tack-free cure with UV light - broad spectrum or LED
- Cures with very low intensity (~20 mW/cm^2)
- On-contact dark area cure capability
- Improved physical properties with low to no blooming after proper light cure
- Heat and humidity resistance
- Wicking-grade viscosity available for fast flow into tight-fitting assemblies
- ISO 10993 evaluated per intended use
- Cold ship/storage

Product	Features & Applications	Nominal Viscosity, cP	Durometer Hardness	Modulus of Elasticity, MPa (psi)	Tensile at Break, MPa [psi]	Elongation at Break, %	Linear Shrinkage, %	ISO 10993 Biocompatibilty
HLC-M-1000	Hybrid light & contact cure adhesive Low to no blooming with light cure Wicking grade viscosity Recommended substrates: ABS, PC, PCTG, PEBA, PETG, PMMA, PS, SAN, SS	3	D80	2,144.3 [311,000]	49 [7,100]	4	0.7	ISO 10993-4 Hemolysis ISO 10993-5 Cytotoxicity ISO 10993-6 Implantation ISO 10993-11 Systemic Toxicity ISO 10993-23 Intracutaneous Irritation
HLC-M-1004	Hybrid light & contact cure adhesive Limited blooming with light cure Recommended substrates: ABS, CAP, PC, PEI, PMMA, SAN	1,300	D65	544.7 [79,000]	13.1 [1,900]	150	0.2	

Why Choose HLC® Adhesives?

Dymax hybrid light-curable adhesives are an excellent choice for manufacturers looking to optimize their manufacturing processes. Fast light-cure times increase production rates and reduce labor costs. The incorporation of contact curing into this technology allows one material to be used on a vast range of substrates and bond areas, eliminating the need for multiple chemistries and additional process steps. HLC® adhesives also benefit from high performance and improved quality, reducing defects and ultimately waste and disposal costs.

- Eliminates the need for multiple chemistries and/or przimers
- Increases throughput
- Streamlines process steps
- Eliminates wait time for dark area curing
- Reduces errors and defects

Features	Dymax Light-Curable Material	Dymax HLC® Adhesive	Cyanoacrylate
Fast Cure Speeds	✓ Full cure in 1-30 seconds	✓ Light cure in 1-30 seconds; Non-light fixture in 5-75 seconds	Fixture only in 10-60 seconds
Tack-Free Surface Cure	Specific formulas only; Can require high-intensity light cure	✓ Tack free with low intensity light (20 mW/cm^2) <5 seconds	Specific formulas only ; Requires use of activators
Open Time (Time Before Cure Begins)	✓ No cure until exposed to high-intensity light	10-30 seconds	10-30 seconds
Moisture Resistance	✓ Some with excellent moisture resistance	✓ Patented technology to increase moisture resistance	Not designed for high humidity or long-term moisture exposure
Temperature Resistance	✓ Can withstand greater temperature extremes or a broader range of temperatures	✓ Patented technology to increase temperature resistance	Not recommended for ≥225ºF (107ºC)
Opaque Substrate Bonding	Opaque substrates block UV and visible light	✓ Not an issue	✓ Not an issue
Impact Resistance	✓ Grades range from flexible to rigid	✓ Patented technology to reduce brittleness and increase impact resistance	Brittle with little impact resistance
Equipment	Light-curing equipment required	✓ Equipment can be used to improve cure time and reduce crazing but not required for dark areas	✓ No equipment required
Gap Cure	✓ Typically recommended for 0.002"-0.25" (0.05-6.35 mm) with some formulas able to provide even larger gap curing	✓ Can accommodate close gaps or larger bond gaps with light cure	Requires close contact
Blooming	✓ None with proper cure	✓ Low to no blooming after proper cure	Produces white haze around bond line during or after the cure
Stress Cracking	✓ Rarely an issue with proper cure	✓ Rarely an issue with proper cure	Tiny cracks in plastic can occur before or during the cure
Bondable Substrates	✓ Bonds dissimilar substrates	✓ Bonds dissimilar substrates	Does not typically bond dissimilar substrates

LCMS FOR CONSUMER ELECTRONICS ASSEMBLY

Typical Applications

1. Camera Module Assembly
2. Micro Speaker Assembly
3. LED Coating
4. LCD Laminating
5. LCD - Form-In-Place Gasket
6. Hard Coating for Screen Protection
7. Flex Circuit Bonding
8. IC - Ruggedization (Underfill Alternative)
9. Masking for Protection During Processing
10. Tamper Proofing
11. PCB - Conformal Coating
12. PCB - Masking

Encapsulants for Printed Circuit Boards

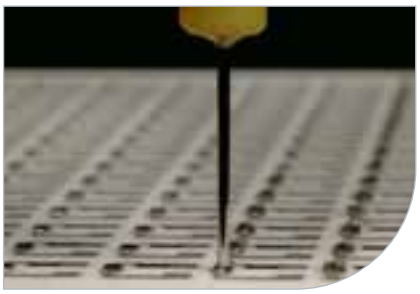
Dymax light-curable materials cure in seconds upon exposure to UV and/or visible light to produce tough, flexible encapsulants for bare die, wire bonds, or integrated circuits (IC). The encapsulants' fast cure helps reduce processing and energy costs associated with alternative technologies. The materials are all one part, so no mixing is required and viscosity is consistent. In addition, Dual-Cure light/moisture cure encapsulants are available to address shadowed area concerns.

Dymax encapsulating materials have high ionic purity, and resistance to humidity and thermal shock, which effectively protect components. Our encapsulants contain no sharp, abrasive, mineral or glass fillers which may abrade fine wires. Their combination of low Tg and low modulus translates into low stress for bonded wires.

UV light-curing and UV/Moisture-cure resins are ideal for glob-top and chip-on-board applications. They may also be used on flex circuits (FPC) for encapsulating ICs, coating the circuit, or attaching it to glass or PCB. A wide range of viscosities from thin wicking to non-flowing gel are available.

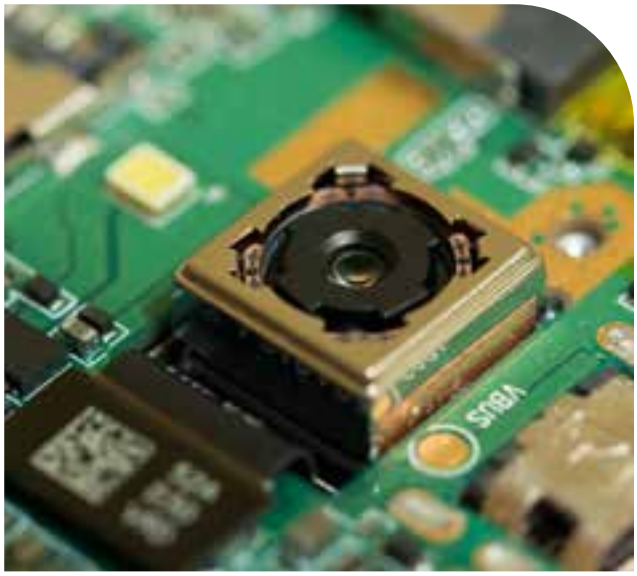
Product Number	Features	Viscosity, cP	Durometer Hardness	Tensile at Break, MPa [psi]	Modulus of Elasticity, MPa [psi]	Halogen Free?
9014	UV/Visible light-curing with secondary moisture cure; flexible	12,500	A70	8.2 [1,200]	119 [17,300]	HF
9037-F	UV/Visible light cure with secondary heat cure; flexible; moisture and thermal resistance; blue fluorescing	50,000	D40	5.8 [850]	6.2 [900]	HF
9-20558-REV-A	UV/Visible light-curing with secondary heat cure; high viscosity; flexible; bonds well to FPCs	24,000	D35	6.2 [900]	2.3 [340]	HF
9008	UV/Visible light cure; flexible; moisture resistant; excellent adhesion to polyimide	4,500	D35	10 [1,500]	45 [6,500]	HF
9101	UV/Visible light cure with secondary moisture cure; flexible; moisture and thermal resistance	7,000	D30-D50	5.06 [735]	17.5 [2,550]	HF
9102		17,000		4.8 [703]	18.4 [2,670]	
9103		25,000		4.9 [718]	17.6 [2,560]	

Featured Product

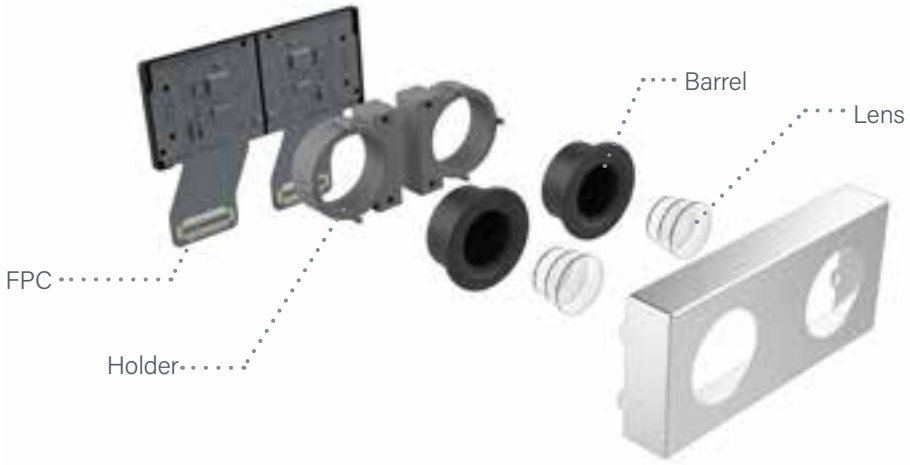


Materials for Camera Module Assembly

Dymax light-curable adhesives are ideal for use in the assembly of camera modules used in smart connected devices, automobiles, and industrial camera systems. Our adhesives cure in seconds, providing greater product yields in a much shorter assembly time. They provide excellent adhesion to substrates typically used in the manufacture of electronic device housings and camera modules, and can withstand harsh conditions like the moisture and shock which electronic devices are often exposed to.



- Excellent adhesion to commonly used substrates in camera module assemblies
- Materials cure in seconds allowing faster processing and higher throughput
- Materials available for a variety of applications including active alignment, barrel fixturing, and FPC reinforcement
- Good resistance to moisture and shock



TYPICAL CAMERA MODULE APPLICATIONS

1. Bonding the camera lenses
2. Fixturing the lens barrel to lens holder
3. Flexible PCB reinforcment
4. Bonding the lens holder to the PCB (active alignment)

Product Number	Features	Viscosity, cP	Durometer Hardness	Tensile at Break, MPa [psi]	Modulus of Elasticity, MPa [psi]	Halogen Free?
Fixturing the Camera Lens Barrel to the Lens Holder | Typical requirement: Tack-free surface						
3094-T-REV-A	UV/Visible light cure; fast curing; low shrinkage and stress	11,750	D65	12.4 [1,800]	179 [26,000]	HF
3094-GEL-REV-A	UV/Visible light cure; fast curing; low shrinkage	30,000	D67	14 [2,000]	698 [101,300]	HF
9801	Low shrinkage epoxy; UV/Visible light cure; LED curable; low temp. heat cure (80-85°C); moisture & thermal cycle resistant; low water absorption; cold storage/ship	60,000	D90	45 [6,600]	1,600 [230,600]	Not Tested
3094-T-TF*	UV/Visible light cure with secondary heat cure; fast curing; low shrinkage and stress	6,500	D67	13.8 [2,000]	650 [94,317]	HF
9803	Very low shrinkage epoxy; UV/Visible light cure; LED curable; low temp. heat cure (80-85°C); moisture & thermal cycle resistant; low water absorption; cold storage/ship	86,000	D94	36.7 [5,328]	3,983 [578,000]	Not Tested
Flexible PCB Reinforcement | Typical requirement: Flexibility; bend resistance						
9008	UV/Visible light cure; remains flexible to -40°C; moisture resistant	4,500	D35	10 [1,500]	45 [6,500]	HF
9101	UV/Visible light cure with secondary moisture cure; flexible; moisture and thermal resistant	7,000	D30-D50	5.06 [735]	17.5 [2,550]	HF
Other Applications						
9309-SC	UV/Visible light cure; adhesion to various PCB substrates; formulated with See-Cure color-change technology	45,000	D57	22 [3,200]	163 [23,800]	HF
6-621-GEL	UV/Visible light cure with secondary heat cure; activator cure; hard, clear bonds	25,000	D80	28 [4,000]	730 [106,000]	HF
6-621-VT		14,000				
6-621-T	UV/Visible light cure with secondary heat cure; activator cure; hard, clear bonds	3,500	D80	28 [4,000]	730 [106,000]	HF
9001-E-V3.0	UV/Visible light cure; low ionic; good electrical properties	400	D45	5.17 [750]	17.2 [2,500]	HF

* This product is not available for sale in Europe.

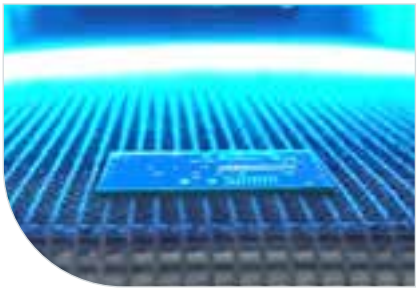
Featured Product

Conformal Coatings

Product	Features	Viscosity, cP	Durometer Hardness	Tensile at Break, MPa [psi]	Modulus of Elasticity, MPa [psi]	Approvals	Halogen Free?
9-20557	Secondary heat cure; flexible; medium-viscosity coating for thin coating applications; blue fluorescing	2,300	D60	15.8 [2,300]	37.9 [5,500]	MIL-I-46058C IPC-CC-830-B UL 94V-1 UL 746	HF
9451	Matte black finish; secondary heat cure for shadow areas; optimized for single pass coating up to 0.004"	6,000	—	42.7 [6,200]	717 [104,000]	UL 94V-0	HF
9483	Secondary moisture cure; excellent thermal shock resistance; corrosion resistant; blue fluorescing	750	D60	16.2 [2,350]	276 [40,000]	MIL-I-46058C IPC-CC-830-B UL 94V-0 UL 746E	HF
984-LVUF	Secondary heat cure; flexible for enhanced thermal shock performance; blue fluorescing	160	D85	55.8 [8,100]	724 [105,100]	MIL-I-46058C IPC-CC-830-B UL 94V-0 UL 746C	HF
9-20351-F	Isocyanate free; blue fluorescing; optimized for wetting high-profile leads; corrosion resistant	11,000	D60	12.4 [1,800]	110.3 [16,000]		
9-20558-REV-A	Thixotropic, high-viscosity coating; bonds well to FPCs; flexible; can be used as a conformal coating as well as an encapsulant	24,000	D35	6.2 [900]	2.3 [340]	UL 94V-0	
9483-NF	Excellent thermal shock resistance; corrosion resistant; great temperature/humidity performance; recommended for automotive applications	750	D60	16.2 [2,350]	276 [40,000]		

Featured Product

*This material is not available for use in the United States

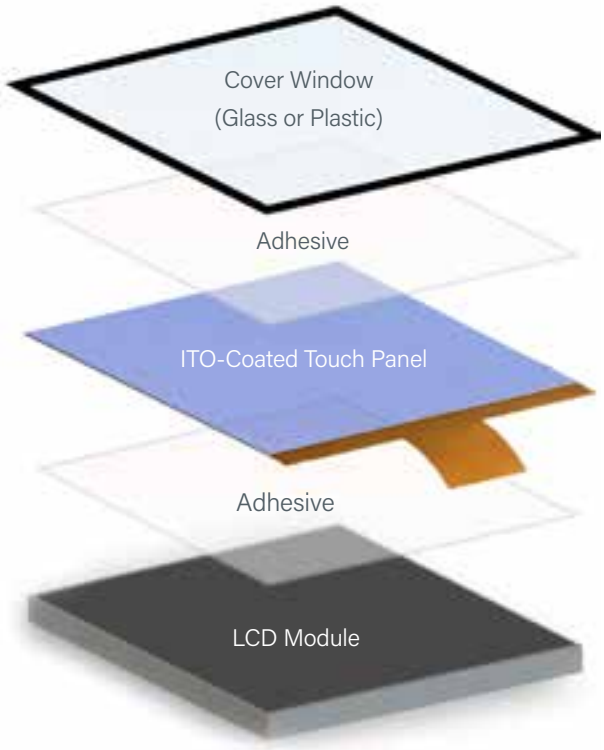


Materials for Display Lamination and Assembly

Dymax light-curable adhesives for display lamination and bonding are specifically formulated for applications where durable, crystal-clear, invisible bonds are required. Their fast, on-demand cure allows substrates to be repositioned precisely until parts are ready to be cured. One-part LCD adhesives are ideal for bonding flat panel displays, touch screens, LCD screens, liquid crystal displays, mobile phones, and many other electronic devices.

- Benefits of Dymax display lamination adhesives include:
- Very low yellowing for increased light trans-mission, enhanced-brightness, optical clarity, and better contrast ratios
- Excellent bond strength
- Superior re-workability for easy removal or repair
- Easy flow characteristics for flat panel lamination
- Excellent thermal shock resistance
- Low shrinkage minimizes visible distortion after cure

LCD adhesives also help reduce air entrapment and bubbles to create strong, ripple-free bonds that help increase panel strength. They also act as a barrier against stressing, significantly improving product reliability and minimizing warranty costs.



Typical Display Construction

Product Number	Features	Viscosity, cP	Durometer Hardness	Tensile at Break, MPa [psi]	Modulus of Elasticity, MPa [psi]	Halogen Free?
9701	Excellent re-workability; very low yellowing; low shrinkage; good thermal shock resistance; bonds to a variety of surfaces	200	00-70	0.49 [71]	0.54 [79]	HF
9702	Excellent re-workability; low shrinkage; very low yellowing; good thermal shock resistance; bonds to a variety of surfaces	950	00-70	0.89 [129]	0.36 [52]	HF
9703	High viscosity making it ideal for edge damming applications; low shrinkage; very low yellowing; good thermal shock resistance; excellent re-workability; bonds to a variety of surfaces	30,000	00-80	1.85 [268]	0.73 [106]	HF

Form-in-Place/Cure-in-Place Gaskets

Light-curable form in place gaskets replace tape, PSA die-cut gaskets, 2K epoxies, silicone rope, and RTV sealants. The gaskets conform to complex and intricate channels, on both vertical and horizontal surfaces, with thixotropic formulations, and flow into channels with Newtonian formulations. Form-in-place gasket materials act as a barrier to prevent absorption or penetration of air, dust, noise, liquids, gaseous substances, or dirt for sound dampening, vibration dampening, moisture protection, chemical protection, air sealing, and gap filling.

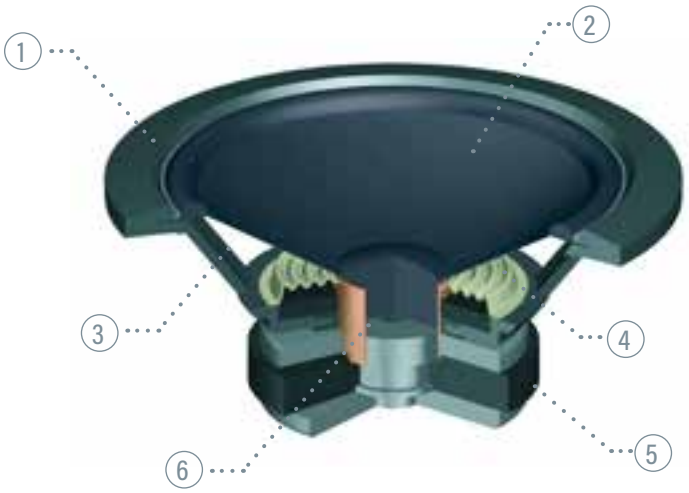
Product	Description	Viscosity, cP	Duraometer Hardness	Tensile at Break, MPa [psi]	Modulus of Elasticity, MPa [psi]
GA-140	Moisture and chemical resistant; cures soft and tack free; low outgassing; adhesion to plastics	39,000	A35	1.5 [211]	0.71 [104]
GA-201	Tack free after proper cure; moisture and chemical resistant; adhesion to plastics	65,000	A35	0.93 [135]	0.75 [110]
GA-103	Excellent heat, water, and chemical resistance; self-leveling liquid; soft	60,000	00-75	0.9 [130]	0.2 [35]
GA-112	Soft and tack-free; excellent tear resistance; moisture resistant; adhesion to metals	40,000	A50	4.5 [660]	1.3 [190]
GA-120	Flexible; soft and tacky; self-leveling viscosity; greatest deflection	1,000	00-50	0.14 [20]	0.9 [13]
GA-142	Soft, sticky and flexible; good adhesion to nylon, plastics, and metals	40,000	00-55	0.5 [75]	0.1 [23]
GA-142-F	Blue fluorescing; soft, sticky, and flexible; good adhesion to nylon, plastics, and metals	40,000	00-60	0.24 [36]	0.01 [2]

Materials for Micro Speaker Applications

With consumers increasingly turning to their phones and other smart devices for music and multimedia applications, the necessity for high-quality micro speakers has drastically increased. UV light-curable adhesives are ideal for micro speaker applications because they provide a strong bond to plastics and metals while providing enough flexibility that sound properties are not compromised.

Dymax adhesives for speaker assembly cure in seconds for optimal performance in speaker applications and can be used in a number of applications including bonding speaker magnets, cones, speaker membranes, and voice coils.

Product	Features	Viscosity, cP	Durometer Hardness	Tensile at Break, MPa [psi]	Modulus of Elasticity, MPa [psi]	Halogen Free?
9671	UV/Visible light cure; bright red color; high adhesion to LCP, voice coil; thick viscosity for easy application	45,000	D55	15.8 [2,100]	179.2 [26,000]	Not Tested
9671-GEL		135,000			193 [26,000]	
3013	UV/Visible light cure; fluorescing for easy inspection; moisture resistant; other viscosities available	150	D70	18 [2,400]	350 [50,000]	HF



TYPICAL SPEAKER COMPONENTS

1. Suspension
2. Cone
3. Basket
4. Spider
5. Magnet
6. Voice Coil

SpeedMask® Temporary Masking Resins

Superior Protection of Printed Circuit Board Components During Processing

Protect connectors and board-level areas during processing with SpeedMask® masking resins. The masks provide reliable, one-layer protection during wave solder and reflow processes, as well as during conformal coating with both solvent-based and light-cure coatings. The masks cure in seconds and are easily removed by peeling.

Product Number	Features	Viscosity, cP	Durometer Hardness	Tensile at Break, MPa [psi]	Modulus of Elasticity, MPa [psi]	Halogen Free?
9-20479-B-REV-A	Ideal for masking board pins and connectors; compatible with gold and copper pins; blue color; thixotropic for manual or automated dispense	115,000	A75	3.37 [490]	4.13 [600]	HF HALOGEN FREE
9-7001	Ideal for masking PCB keep-out areas and connectors; pink color in uncured state; compatible with gold and copper pins; resistant to solvent-based conformal coatings and primers	40,000	A70	3.8 [560]	1.9 [275]	HF HALOGEN FREE
9-7004	LED curable (385nm); high-visibility blue color; compatible with gold and copper connector pins; highly thixotropic for manual or automated dispensing	115,000	A63	1.4 [200]	4.1 [600]	HF HALOGEN FREE
9-318-F	Highly thixotropic for manual or automated dispensing; silicone free; very low VOCs; blue fluorescing	50,000	A55	3 [440]	2 [310]	HF HALOGEN FREE

Featured Product

Protection of Parts During Handling and Surface Treatments

SpeedMask® masking resins are ideal for protecting delicate surfaces from scratching or other damage during handling or protecting parts during more aggressive surface treatments like anodizing, machining, and polishing. The masks are available in highly visible colors, making it easy to confirm placement. They cure in seconds, allowing the part to be processed immediately. After processing, the masks are easily removed from non-porous surfaces, leaving no residue behind.

Product Number	Features	Viscosity, cP	Durometer Hardness	Tensile at Break, MPa [psi]	Modulus of Elasticity, MPa [psi]
726-SC	See-Cure blue-to-pink color change technology; spray or dip; easy peel adter exposure to heat	52,000	D40	6.8 [980]	3.9 [560]
728-G-LV	Ideal for machining and polishing processes; high-visibility green color; easy peel off after hot water soak; spray or dip dispense options; acid resistant	2,500	D50	23.4 [3,400]	293 [42,500]
730-BT	Excellent surface protection and chemical resistance during anodizing; moderate adhesion; spray or dip; trimmable after cure; high-visibility blue color	22,000	D35	3.4 [700]	3.4 [500]

Featured Product

Typical Masking Applications

1. Masking PCB components and keep-out areas before conformal coating, wave solder, or reflow processes
2. Masking housing before painting, coating, or anodizing
3. Protect surface while engraving logos and other items or when machining out areas for buttons, speakers, and cameras
4. Mask off delicate parts to protect them from buffing/polishing or handling

Ruggedizing/Edgebond Materials for BGAs & VGAs

Dymax component ruggedizing and staking materials are engineered to hold critical components, such as Ball Grid Arrays (BGA) and Video Graphics Arrays (VGA), for secondary processes or long-term reliability. Should one ball-grid interconnect fail, an entire device could be compromised. UV light-curable ruggedizing materials help enhance the shock and vibration resistance of electronic assemblies.

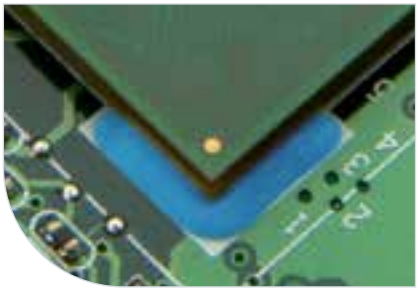
As an alternative to underfill or heat-cured epoxies, light-curable adhesives offer a range of benefits including:

- Fast, ambient dispense and cure in seconds
- Easy rework – adhesive leaves no residue on solder pads or between solder balls
- Reduced stress on interconnects during push, pull, shock, drop, and vibration
- Enhance PCB life span
- Eliminate leadless component (BGA/VGA) interconnect cracking due to CTE mismatch
- Post reflow application
- Simple visual inspection

Product	Description	Viscosity, cP	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]
9309-SC	Highly thixotropic; formulated with See-Cure technology for easy visual confirmation of full cure	45,000	D57	140	163 [23,800]	22 [3,200]
9310	UV/Visible light-cure with secondary heat cure for shadow areas; reduces stress on componens; adhesion to various PCB substrates; highly thixotropic	60,000	D62	145.5	103 [15,000]	12 [1,700]
9422-SC	Formulated with See-Cure color-change technology; highly thixotropic; reduces stress on components; great adhesion to various PCB substrates	38,000	D50	170	98 [14,000]	16 [2,300]
9773	BGA, CSP ruggedizing adhesive; meets ASTM E595 low outgassing; halogen and silicone free; low ionic content (Mil-Std 883 Method 5011 compliant); slump resistance at 90° up to 72 hours; jetting compatible; NASA MAPTIS material number 09907	54,000	D47	85	103 [15,000]	12 [1,700]

Featured Product

SC See-Cure Technology



Materials for Consumer Wearable Device Assembly

Designed for Close Proximity to Skin

Dymax 9200-W series adhesives are designed for the assembly of wearable consumer (non medical) electronic devices where materials of concern and proximity to skin matter. We have intentionally removed potential skin sensitizers like IBOA (isobornyl acrylate) or materials of concern to make our materials wearable-friendly without compromising trusted quality and high performance. This series includes materials for encapsulation, optical positioning, sealing, bonding, and general assembly.

Product Number	Features	Cure Machanism	Substrates	Viscosity, cP	Durometer Hardness	Water Absorption, % (25°C, 24h)	Tensile at Break, MPa [psi]	Modulus of Elasticity, MPa [psi]	Halogen Free?
9201-W	IBOA-free encapsulant; moisture, thermal, and impact resistance; ideal for chip on board, chip on flex, or wire bond encapsulation; excellent component protection against chemical or environmental exposure	UV broad spectrum; UV LED 365 nm; Moisture cure	ABS, FR4, PA, PI, PET, TPU	32,000	D20-D40	0.13	11.1 [1,614]	322 [46,790]	HF HALOGEN FREE
9202-W	IBOA-free positioning adhesive; low shrinkage and outgassing; moisture resistance; low CTE; designed for optical alignment and lens positioning	UV broad spectrum; UV LED 405 nm;	PC, PET, PMMA, Glass, SS	260,000	D88	0.14	35.9 [5,200]	4,214 [611,150]	
9210-W	IBOA-free encapsulant; moisture resistance; great reliability testing performance; ideal for component encapsulation, FPC reinforcement, & selective protection	UV broad spectrum; Moisture cure	FR4, PA, PI	29,000	D55-D75	0.13	15.3 [2,222]	561 [81,369]	HF HALOGEN FREE
9211-W	IBOA-free plastic bonder; low stress; ideal for CCM barrel and holder assembly; adheres to a wide range of plastics	UV broad spectrum	ABS, FR4, LCP, PA6, PC, PET, PETG, PI, PU, TPU	20,000	D63	2.98	16.4 [2,378]	700 [101,540]	

Smart Watch

9200-W Series Adhesives Application Areas

1. Selective coating or environmental protection
2. Component encapsulation
3. FPC reinforcement
4. Assembly & sealing enclosures
5. Structural bonding
6. Sensor encapsulation

LCMS FOR ELECTRONICS ASSEMBLY

Encapsulants & Wire Bonders

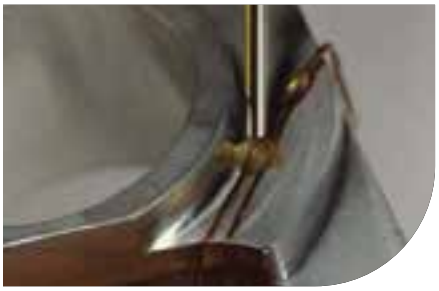
Dymax encapsulants cure in seconds upon exposure to UV and/or visible light to provide tough, flexible protection for bare die, wire bonds, or integrated circuits (IC). The encapsulants' fast cure helps reduce processing and energy costs associated with alternative technologies. The materials are all one part, so no mixing is required and viscosity is consistent.

Product	Description	Applications	Durometer Hardness	Viscosity, cP	Elongation at Break, %	Modulus of Elasticity, MPa [psi]
Dual-Cure Encapsulants: UV Broad-Spectrum Light Cure + Secondary Moisture Cure						
9014	Flexible; room temperature stable; blue fluroescing	Chip-on-board; Chip-on-flex; Chip-on-glass; Wire bonding	A70	12,500	63	119 [17,300]
9101	Flexible; moisture and thermal resistance	Chip-on-board; Chip-on-flex; Chip-on-glass; Wire bonding	D30-D50	7,000	38	17.5 [2,550]
9201-W	Wearable device friendly; LED optimized; IBOA free; moisture, thermal, and impact resistance; excellent protection against chemical or environmental exposure	Chip-on-board; Chip-on-flex; Wire bond encapsulation	D20-D40	32,000	178	322 [46,790]
9210-W	Wearable device friendly; IBOA free; moisture resistance; great reliability testing performance	Component encapsulation; FPC reinforcement; Selective protection	D55-D75	29,000	28.2	561 [81,369]
9102	Flexible; moisture and thermal resistance	Chip-on-board; Chip-on-flex; Chip-on-glass; Wire bonding	D30-D50	17,000	34	18.4 [2,670]
9103				25,000	36	17.6 [2,560]

Featured Product **W** IBOA-free for wearable devices

Key Attributes

- No added solvents
- Low stress under thermal cycling
- Instant UV/Visible cures
- Electrically insulating
- High ionic purity
- Room-temperature storage
- Tenacious adhesion to flex circuit substrates (polyimide and PET)
- Thermal shock and moisture resistance



Product	Description	Applications	Durometer Hardness	Viscosity, cP	Elongation at Break, %	Modulus of Elasticity, MPa [psi]
Multi-Cure® Encapsulants: UV Broad-Spectrum Light Cure + Secondary Heat Cure						
9-20558-REV-A	Flexible, high viscosity, thixotropic material; bonds well to FPCs; UL 94V-0 flammability rating	Conformal coating; Chip encapsulation; Wire bonding	D35	24,000	160	2.3 [340]
9001-E-V3.1-REV-B	Flexible, clear encapsulant with improved moisture and thermal cycle resistance; good ionic and electrical properties; low modulus for wire bonding	Chip-on-board; Chip-on-flex; multi-chip modules; wire bonding	D45	4,500	150	17 [2,500]
9037-F	Flexible with excellent moisture and thermal resistance; blue fluorescing	Chip-on-board; Chip-on-flex; Chip-on-glass; Wire bonding	D40	50,000	173	10.7 [1,554]
9-911-REV-B	High viscosity for optimal coverage of wires; solvent resistant; blue fluorescing; high bond strength to circuit board components; compatible with Dymax conformal coatings	Wire tacking	D80	25,000	30	552 [80,000]
9001-E-V3.0	Flexible, clear encapsulant with improved moisture and thermal cycle resistance; good ionic and electrical properties	Chip-on-board; Chip-on-flex; Chip-on-glass; Wire bonding; Bare-die encapsulation	D45	400	200	5.4 [790]
9001-E-V3.1	Flexible, clear encapsulant with improved moisture and thermal cycle resistance; good ionic and electrical properties; low modulus for wire bonding	Chip-on-board; Chip-on-flex; Chip-on-glass; Wire bonding; Bare-die encapsulation	D45	4,500	150	17 [2,500]
UV Broad-Spectrum Light Cure						
9008	Flexible; highly moisture-resistant bonds to diverse surfaces such as polyimide, DAP, glass, epoxy board, metal, PET; high adhesion, even at -40°C	Chip-on-flex; Flex circuit bonding and attachment to PCB and glass	D35	4,500	270	45 [6,500]

Featured Product

LED Encapsulating

Dymax 9600-series materials provide optimal protection for LEDs. These materials resins keep LED lighting brighter over time are are also low stress, so fragile COB wire bonds are not compromised during thermal excursions or normal operating environments.

Product	Description	Applications	Viscosity, cP	Duraometer Hardness	Linear Shrinkage
9622	UV/Visible light cure in seconds; no mixing required; heat resistant to 100°C; resistant to long-term UV exposure; high light transmittance; durometer between silicone and epoxy	Instant casting of LEDs; Rapid forming of protective optical lens	12,000	D65	1.6 %
9624	UV light cure in seconds; no mixing or refrigeration required; heat resistant to 100°C; resistant to long-term UV exposure; low viscosity for thin coatings	Conformal coating for LED arrays; Colorless encapsulation of COB LEDs; Instant forming of protective lens for high-intensity LEDs	120	D75	1.0 %

Key Attributes

- One component - no mixing required
- Enhances light transmittance
- Fast cure
- No added solvents
- Resistant to heat-induced yellowing
- Optically clear

Optical Bonding & Positioning

Dymax optical bonding and positioning adhesives deliver fast, reliable bonding with low movement and shrinkage. These adhesives cure rapidly to form optically clear, low-stress joints with high tensile strength and low shrinkage. Single-component, light-curable formulations are engineered for VCSEL potting, lens fixturing, laminating and positioning, and fiber-optic assembly, offering the ability to bond glass, quartz, ceramics, metals, and plastics with minimal movement during cure.

Product	Description	Viscosity, cP	Durometer Hardness	Tensile at Break, MPa [psi]	Modulus of Elasticity, MPa [psi]	Shrinkage, %
9202-W	IBOA-free positioning adhesive for wearable devices; designed for optical alignment; low shrinkage; low CTE; heat cycle stable	260,000	D88	35.9 [5,200]	4,214 [611,150]	0.50 Linear
9803	Very low shrink epoxy; LED curable; UV/Visible light cure and/or low temp. (80-85°C) heat cure; moisture and thermal cycle resistant; cold storage/ship	80,000	D94	36.7 [5,328]	3,983 [578,000]	1.40 Volumeric
OP-29-GEL	UV light-cure; low stress; flexible; optically clear; resists yellowing; ideal for tacking, bonding, sealing, and potting	20,000	D65	24 [3,500]	200 [30,000]	0.79 Linear
9801	Low shrink epoxy; LED curable; UV/Visible light cure and/or low temp. (80-85°C) heat cure; moisture and thermal cycle resistant; cold storage/ship	60,000	D90	45 [6,600]	1,600 [230,600]	1.50 Volumeric
OP-29	UV light-cure; low stress; flexible; optically clear; resists yellowing; ideal for tacking, bonding, sealing, and potting	2,500	D60	22 [3,200]	234 [34,000]	0.79 Linear
OP-60	High stregth positioning adhesive; UV/visible light cure; low shrinkage, outgassing, moisture absorption, and CTE; opaque; heat-cycle stable	150,000	D80	33.7 [4,900]	1,008 [146,250]	0.80 Linear

Featured Product **W** IBOA-free for wearable devices **GEL** Gel Viscosity

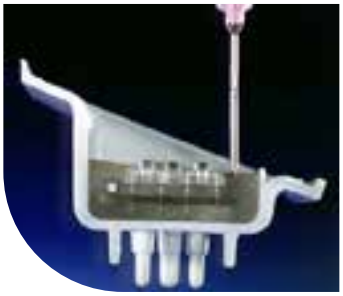
Key Attributes

- Cure in seconds
- Optically clear
- Excellent light transmission properties
- High strength
- Low stress
- Low shrinkage and outgassing properties result in low movement
- One component - no mixing
- No solvents added

Potting Materials

Dymax shallow potting materials cure tack free in seconds upon exposure to UV/Visible light. Each potting compound is engineered to bond different substrates, offering tenacious adhesion to plastics and metals. UV potting resins reduce waste from off-ratio mixing and are free from isocyanates and heavy metals. Processing in seconds eliminates fixtures, jigs, racks, and ovens to increase space and lower total inventory costs.

Product	Description/Applications	Viscosity, cP	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]
921-T	Translucent bonds with high adhesion; applications: tamper proofing, connectors, and thermal switches	3,000	D80	50	563 [82,000]	24 [3,600]
921-VT		11,500	D80	35	540 [78,450]	22 [3,200]
921-GEL		25,000	D80	30	583 [84,650]	25 [3,640]



Key Attributes

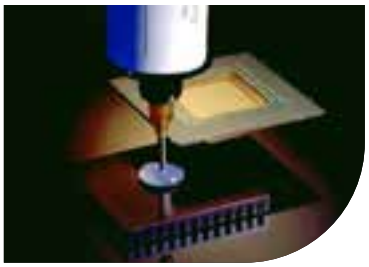
- Full UV/Visible cure in seconds
- No added solvents
- High adhesion to substrates
- Flexible and rigid products available

Thermal Interface Adhesives

Dymax thermally-conductive adhesives provide an efficient method of thermal transfer between heat sinks and electronics. They cure in seconds upon exposure to UV/Visible light, providing high-performance characteristics with maximum processing convenience. These adhesives may be used for mounting heat sinks and heat-sensitive electronic components to printed circuit boards or for use in any application where it is desirable to increase thermal conductivity between assembled parts. Thermal management adhesives eliminate the need for mechanical fasteners and clips.

Product	Description	Applications	Thermal Conductivity	Nominal Viscosity, cP	Elongation at Break, %	Tensile at Break, MPa [psi]
9-20801	Light cure in seconds; secondary activator or heat cure for shadow areas*; highly thixotropic for optimal placement	Mounting heat sinks on PCBs; LED heat dissipation	0.9 W/m*K	110,000	NA	14 [2,100]

*Dymax 501-E-REV-A is the recommended activator for shadowed areas



Key Attributes

- Sets in seconds with light exposure
- Highly conductive
- Low stress for mismatched CTE's
- High-strength bonds
- Room-temperature storage and cure

Structural Adhesives

From bonding appliance housings to securing camera module components, Dymax structural adhesives are engineered to deliver strong bonds to a wide variety of glass, metal, and plastic substrates. They are formulated to withstand demanding environments, helping improve product performance and longevity.

Product	Description	Applications	Viscosity, cP	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]
3013-T	Rapid bonding of plastics and metals; blue fluorescing; moisture resistant	Plastic Assembly Plastic-to-Metal Bonding Bond Joint Sealing	6,250	D70	127	19 [2,766]	792 [115,000]
3099-VT	Rapid bonding of plastics and glass; strong bonds to PMMA (acrylic)	Appliance Assembly Plastic Housing Assembly Display Assembly	15,000	D75	170	19 [2,800]	400 [58,000]
3094-T-REV-A	Rapid bonding of a variety of plastics; low shrinkage and stress	CCM Assembly Camera Module Barrel Fixturing Appliance Assembly	11,750	D65	184	698 [101,300]	14 [2,000]
3094-GEL-REV-A	Low stress plastic bonder; low shrinkage	CCM Assembly Appliance Assembly Plastic Assembly	30,000	D67	200	12.4 [1,800]	179 [26,000]
431	Rapid bonding of glass, plastic, and metal; high temperature and moisture resistant	Glass Assembly Glass-to-Metal Assembly	500	D70	61	27 [3,900]	570 [82,000]
6-630-T	High adhesion to glass and metal; secondary heat or activator cure; high temperature and moisture resistant; flexible	Structural Glass Assembly Potting	6,000	D70	130	413 [60,000]	28.2 [4,100]
9211-W	IBOA-free adhesive for wearable devices; low stress; adheres to a wide range of plastics	CCM Assembly Camera Module Barrel Fixtures Plastic Assembly Wearable Devices	25,000	D63	191	16.4 [2,378]	700 [101,540]
9501-R	Excellent adhesion to metal and plastic; LED curable (385nm); red color	EV Battery Bonding Battery Potting	10,500	D68	170	640 [92,200]	18.3 [2,700]

Featured Product **GEL** Gel Viscosity **T** Thick **VT** Very Thick **W** IBOA-free for wearable devices **Z** TPO free

Product	Description	Applications	Viscosity, cP	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]
3013	Rapid bonding of plastics and metals; blue fluorescing; moisture resistant	Appliance Assembly Plastic Assembly	150	D70	70	350 [50,000]	18 [2,400]
3013-GEL			27,000	D70	144	697 [101,172]	19.9 [2,885]
3094	Low stress plastic bonder; low shrinkage	Appliance Assembly Plastic Assembly	1,000	D62	170	240 [35,000]	14 [2,100]
3099	Rapid bonding of plastics and glass; strong bonds to PMMA (acrylic)	Appliance Assembly Plastic Housing Assembly Display Assembly	150	D75	220	917 [133,000]	21.4 [3,100]
3099-T			10,000	D75	170	400 [58,000]	19 [2,800]
3401	Rapid bonding of plastics and metal; secondary moisture cure; thermal and moisture resistance; blue fluorescing	Appliance Assembly Plastic Assembly	150	D55-D75	13	506 [73,400]	30 [4,400]
429	Rapid bonding of glass, metal, and plastic; optically clear; uv resistant; high impact; resistant to yellowing and thermal shock	Large-Area Bonding Potting Critical Components Metal-to-Glass Bonding	2,500	D60	120	67 [9,700]	21.6 [3,140]
429-GEL			20,000				
429-T			5,000				
431-T	High adhesion to glass and metal; high temperature and moisture resistant;	Glass Assembly Glass-to-Metal Assembly	6,000	D70	86	439 [63,700]	24 [3,500]
6-621-GEL	Forms hard, clear bonds to a variety of substrates including metal, glass, ceramic, and phenolic and filled plastics	Structural Batttery Bonding	25,000	D80	20	730 [106,000]	28 [4,000]
6-630	High adhesion to glass and metal; secondary heat or activator cure; high temperature and moisture resistant; flexible	Structural Glass Assembly Potting	500	D70	93	407 [59,000]	22.4 [3,250]

GEL Gel Viscosity **T** Thick **VT** Very Thick

LCMS FOR AUTOMOTIVE ELECTRONICS ASSEMBLY

Typical Applications

Conformal Coatings

1 - Electronic Throttle Control

2 - Control Modules and Sensors

3 - Battery Management Systems (Hybrid and Electric Vehicles)

4 - Drive Shaft Coatings

5 - Door and Window Controls

6 - EGR Valve

7 - Tire Pressure Indicators

8 - Navigation System

9 - Airbag Sensors

10 - Power Steering Module

11 - Instrument Panel Circuitry

12 - Audio Circuitry

13 - Heating and Cooling Circuitry

Encapsulants

14 - Wire Coating

Potting Materials

15 - Lighting/Active Alignment

16 - Battery Pack Potting (Hybrid & Electric Vehicles)

17 - Wire Harness

18 - Module Damming

Materials for Camera Assembly

19 - Rear View Camera

20 - Front View Camera

21 - Camera Modules (ADAS)

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Available Products

Product Name	UV/Visible Light	Heat	Moisture	Features/Applications	Nominal Viscosity, cP	Durometer Hardness	Tensile at Break, MPa [psi]	Modulus of Elasticity, MPa [psi]
CONFORMAL COATINGS								
9-20557	•	•		Flexible; medium-viscosity coating for thin coating applications; isocyanate free; blue fluorescing; approvals: MIL-I-46058C, UL 746, IPC-CC-830-B, UL Flammability	2,300	D60	15.8 [2,300]	37.9 [5,500]
9481-E-PZ	•		•	Dual-cure for shadow areas; blue fluorescing	115	D60	46 [6,700]	1,900 [271,100]
9483-Z	•		•	Excellent chemical and thermal shock resistance; flame retardant; bright blue fluorescing; great temperature/humidity performance; approvals: MIL-I-46058C, IPC-CC-830-B, UL 746E, UL 94V-0	750	D60	10.3 [1,500]	480 [70,000]
9-20557-LV	•	•		Flexible for enhanced thermal shock performance; blue fluorescing; approvals: MIL-I-46058C, IPC-CC-830-B	850	D70	21.7 [3,150]	310 [45,000]
ENCAPSULANTS FOR PRINTED CIRCUIT BOARDS AND WIRE COATING								
9014	•		•	Flexible; cures with UV light but includes a secondary moisture cure function for shadow areas	12,500	A70	8.2 [1,200]	119 [17,300]
9037-F	•	•		Flexible; good moisture and thermal resistance; blue fluorescing	55,000	D40	5.8 [850]	6.2 [900]
9-20558-REV-A	•	•		High viscosity; thixotropic for minimal movement after dispense; flexible; bonds well to FPCs; UL 94V-0 certified	24,000	D35	6.2 [900]	2.3 [340]
9001-E-V3.1	•	•		High viscosity; excellent adhesion to PCB & components	4,500	D45	5.2 [750]	17 [2,500]
9008	•			Flexible; excellent adhesion to polyimide	4,500	D35	10 [1,500]	45 [6,500]
9101	•		•	Dual-cure for shadow areas; flexible; moisture and thermal resistance	7,000	D30-D50	5.06 [735]	17.5 [2,550]
9102	•		•		17,000	D30-D50	4.8 [703]	18.4 [2,670]
9103	•		•		25,000	D30-D50	4.9 [718]	17.6 [2,560]
FORM-IN-PLACE / CURE-IN PLACE GASKETS								
GA-140	•			Low outgassing; excellent teat resistance; cures soft and tack free; conforms to intricate channels and recesses; silicone free	39,000	A35	1.5 [211]	0.71 [104]
GA-201	•			Tack-free after proper cure; moisture and chemical resistant; soft and durable; conforms to intricate channels	65,000	A35	0.93 [135]	0.75 [110]

Featured Product

Product Name	UV/Visible Light	Heat	Moisture	Features/Applications	Nominal Viscosity, cP	Durometer Hardness	Tensile at Break, MPa [psi]	Modulus of Elasticity, MPa [psi]
MATERIALS FOR ADVANCED DRIVER ASSISTANCE SYSTEMS (ADAS)								
9801	•	•		Ideal for active alignment (camera module holder to board bonding); low shrinkage; one-part epoxy; low temperature heat cure (80-85°C); good moisture and thermal resistance; cold storage/ship; flexible	60,000	D90	45 [6,600]	1,600 [230,600]
9803	•	•		Ideal for active alignment; very low volumetric shrinkage and water absorption; one-part epoxy; low temperature heat cure (80-85°C); moisture and thermal cycle resistant; cold storage/ship	86,000	D94	36.7 [5,328]	3,983 [578,000]
3094-GEL-REV-A	•			Fast curing; low shrinkage and stress	30,000	D67	12.4 [1,800]	179 [26,000]
MATERIALS FOR EV BATTERY PACK ASSEMBLY								
6-621-VT	•	•		For structural bonding applications; forms hard, clear bonds to a wide variety of substrates including plastic, metal, and glass; activator cure	14,000	D80	28 [4,000]	730 [106,000]
9501-F	•			For structural bonding applications; excellent adhesion to metals and plastics; blue fluorescing; LED curable at 385 nm	10,000	D65	17.2 [2,500]	545 [79,000]
POTTING MATERIALS								
9-20557	•	•		Low modulus for enhanced thermal cycling performance; blue fluorescing; isocyanate free; one part – no mixing or dilution required	2,300	D60	15.8 [2,300]	37.9 [5,500]
9001-E-V3.1	•	•		Excellent adhesion to engineering plastics; flexible; excellent moisture and thermal cycle resistance; clear	4,500	D45	5 [750]	17 [2,500]
9008	•			Remains flexible at low temperatures; highly moisture resistant	4,500	D35	10 [1,500]	45 [6,500]
RUGGEDIZING/EDGEBOND MATERIALS FOR BGAS & VGAS								
9309-SC	•			Formulated with See-Cure technology; highly thixotropic	45,000	D57	22 [3,200]	163 [23,800]
SPEEDMASK® MASKANTS								
9-7001	•			Pink color when uncured; resistant to solvent-based conformal coatings and primers; compatible with gold and copper connector pins	40,000	A70	3.8 [560]	1.9 [275]
9-20479-B-REV-A	•			Blue in color for easy visual inspection; compatible with gold and copper connector pins; thixotropic for manual or automated dispensing	115,000	A75	3.37 [490]	4.13 [600]
9-318-F	•			Highly thixotropic for manual or automated dispensing; very low VOCs; blue fluorescing	50,000	A55	3 [440]	2 [310]

Featured Product

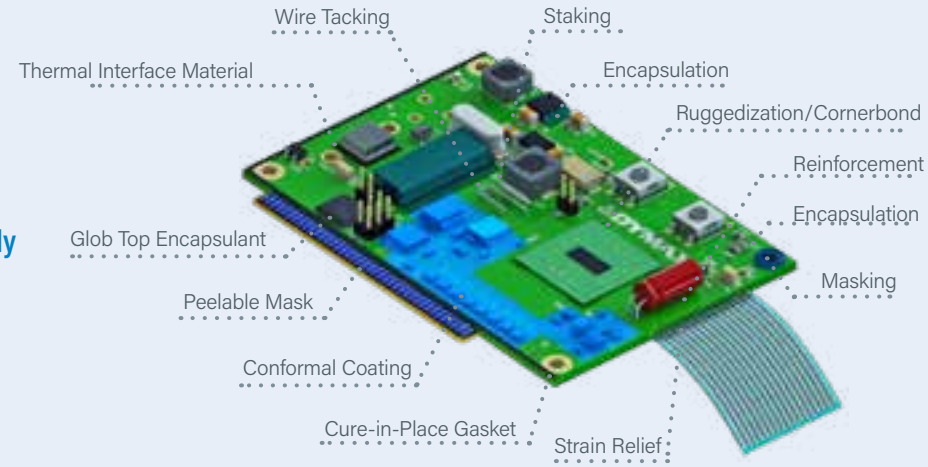
LCMS FOR AEROSPACE & DEFENSE SYSTEMS

Typical Applications

Application Areas (See Page 42 for Details)

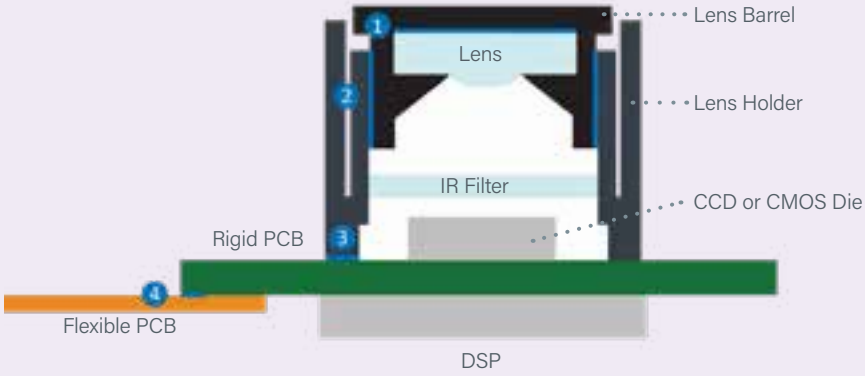
- Printed Circuit Board Assembly
- Sensor Camera Module Assembly
- Surface Protection for Engine Components

Printed Circuit Board Assembly



Additional Applications – Inductors & Transformers - Magnet Bonding

Sensor Camera Module Assembly



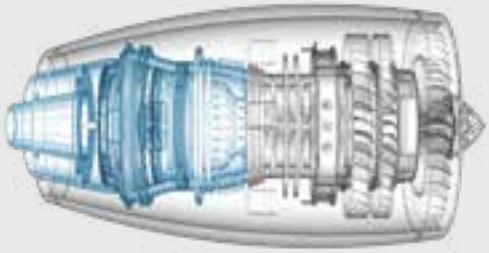
1 - Bonding the camera lens

2 - Fixturing the camera lens barrel to the lens holder

3 - Bonding the lens holder to the PCB

4 - Reinforcing the FPC

Surface Protection for Engine Components



- Compressor Blades & Vanes
- Compressor Lines & Cases
- Integrated Blade Rotors/Blisks
- Fluid Line Fitting
- Turbine Disks
- Fan Blades
- Air Seals Hot Section Blades & Vanes
- Combustion Cases
- Combustion Liners
- Nozzle Guide Vanes
- Stacked Vanes
- Many, Many More Components

Light-Cure Materials for Avionics

Dymax light-curable materials are designed to address the growing industry challenges and demands in the aerospace avionics sector. Our light-cure solutions help manufacturers improve imaging sensors used for ground proximity, aircraft health management, surveillance, and missile guidance systems and even protect printed circuit board assemblies from the harsher conditions they must withstand. IPC approved, MIL-I-46058C, and UL listed self-extinguishing grades are available. Most products are available in multiple viscosity grades, so the material flow may be tailored to the individual application.

Product	UV/Visible	LED	Moisture	Heat	Activator	Description	Nominal Viscosity, cP	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]	Shrinkage, %
CONFORMAL COATINGS												
9-20557	•			•		Low modulus for thermal cycling performance; blue fluorescing; suitable for most types of spray equipment; MIL-I-46058C, UL 94V-1, UL 746, IPC-CC-830-B, UL 94V-0	2,300	D60	150	37.9 [5,500]	15.8 [2,300]	1.1 Linear
9451	•			•		True black coating ideal for covering sensitive information; optimized for single pass coating but can be coated in multiple passes if needed	6,000	D80	4.4	717 [104,000]	42.7 [6,200]	-
9481-E-PZ	•		•			High chemical and abrasion resistance; low viscosity for thin coatings; bright blue fluorescing; MIL-I-46058C, UL 746-E, IPC-CC-830B, UL 94V-0	115	D60	60	1,900 [271,100]	46 [6,700]	1.8 Linear
9483-Z	•		•			Excellent thermal shock resistance; corrosion resistant; blue fluorescing; MIL-I-46058C, IPC-CC-830-B, UL 94V-0, UL 746E	750	D60	19	480 [70,000]	10.3 [1,500]	2.0 Linear
9771	•		•			Meets ASTM E595 low outgassing; low ionic content (Mil-Std 883 Method 5011 compliant); corrosion and temperature/humidity resistance; blue fluorescing; UL 94V-0, UL 746-E, MIL-I-46058C, IPC-CC-830-B, NASA MAPTIS material number 09841	780	A62	13	910.3 [132,026]	20.4 [2,952]	1.4 Linear
9-20557-LV	•			•		Low viscosity for thin coatings; low modulus for enhanced thermal cycling performance; blue fluorescing; halogen-free; MIL-I-46058C, IPC-CC-830-B	850	D70	100	310 [45,000]	21.7 [3,150]	0.3 Linear
9452-FC	•			•		Very low viscosity; ideal for film/flow coating; LED curable; blue fluorescing; excellent wettability; excellent thermal shock resistance	20	D60	6	1,137 [165,000]	34 [4,950]	0.4 Linear
9624	• UV					Conformal coating for LEDs; low viscosity for thin coatings; low VOCs; isocyanate free; heat resistant to 100°C; resistant to long-term UV exposure; no mixing or refridgeration required; UL 94V-0	120	D75	1.5	867 [125,742]	9.7 [1,413]	1.0 Linear

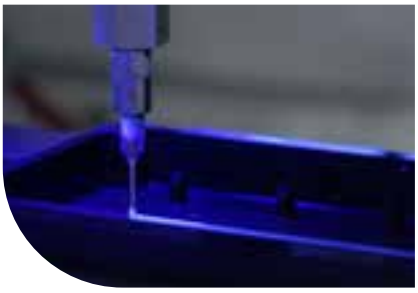
Featured Product

Product	UV/Visible	LED	Moisture	Heat	Activator	Description	Nominal Viscosity, cP	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]	Shrinkage, %
ENCAPSULANTS												
9014	•		•			Flexible; room-temperature stable; blue fluorescing	18,000	A70	63	119 [17,300]	8.2 [1,200]	1.8 Linear
9037-F	•			•		Flexible with excellent moisture and thermal resistance; blue fluorescing	55,000	D40	110	6.2 [900]	5.8 [850]	2.2 Linear
9-20558-REV-A	•			•		Flexible, thixotropic material; bonds well to FPCs; UL 94V-0	24,000	D35	160	2.3 [340]	6.2 [900]	1.8 Linear
9001-E-V3.0	•			•		Flexible, clear encapsulant with improved moisture and thermal cycle resistance; good ionic and electrical properties	400	D45	200	5.4 [790]	6.9 [1,000]	-
9001-E-V3.1	•			•		Flexible, clear encapsulant with improved moisture and thermal cycle resistance; good ionic and electrical properties	4,500	D45	150	17 [2,500]	5.2 [750]	2.0 Linear
9008	•					Flexible encapsulant with excellent moisture resistance; ideal for COF applications; remains flexible to -40°C	4,500	D35	270	45 [6,500]	10 [1,500]	1.2 Linear
9102	•		•			Flexible encapsulant with great moisture and thermal resistance	17,000	D30-D50	34	18.4 [2,670]	4.8 [703]	2.0 Linear
9103	•		•			Flexible encapsulant with great moisture and thermal resistance	25,000	D30-D50	36	17.6 [2,560]	4.9 [718]	2.0 Linear
9622	•					LED casting encapsulant; high viscosity for dome shape; very low VOCs; one part, no mixing required; heat resistant to 100°C; resistant to long-term UV exposure; high light transmittance	12,000	D65	8	110 [16,000]	7.6 [1,100]	1.6 Linear

Featured Product

Product	UV/Visible	LED	Moisture	Heat	Activator	Description	Nominal Viscosity, cP	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]	Shrinkage, %
GAP FILL - FIP GASKETS												
GA-201	•					Tack free after proper cure; soft and durable; moisture and chemical resistant; conforms to intricate channels and recesses	65,000	A35	165	0.75 [110]	0.93 [135]	1.1 Linear
GA-103	•					Excellent water and acid/base resistance; self-leveling; silicone free; low compression set; high/low temperature resistant good adhesion to plastic, electroplated plastic, and metal surfaces	60,000	00-75	63	0.2 [35]	0.9 [130]	0.8 Linear
GA-112	•					Excellent tear resistance; cures soft and tack free; low outgassing; moisture resistant; silicone free; excellent adhesion to metals	40,000	A50	360	1.3 [190]	4.5 [660]	1.5 Linear
GA-120	•					flexible; soft and tacky; self-leveling viscosity; greatest deflection; silicone free; good adhesion to Nylon and metals	1,000	00-50	110	0.9 [13]	0.14 [20]	-
GA-142	•					Soft, tacky, and flexible, silicone free; good adhesion to Nylon and metals	40,000	00-55	330	0.1 [23]	0.5 [75]	1.6 Linear
GA-142-F	•					Soft, tacky, and flexible; blue fluorescing; silicone free; good adhesion to Nylon and metals	40,000	00-60	240	0.01 [2]	0.24 [36]	-
MASKANTS												
9-20479-B-REV-A	•					Blue color for easy visual inspection; compatible with gold and copper pins; silicone free	115,000	A75	140	4.13 [600]	3.37 [490]	1.6 Linear
9-7001-REV-A	•					Visible pink color in uncured state; resistant to solvent-based conformal coatings and primers; compatible with gold and copper pins; lower shrinkage; silicone free	42,500	A68	208	3.2 [464]	4.2 [609]	2.0 Linear
9-7004-REV-A	•	•				LED curable (385nm); high-visibility blue color; compatible with gold and copper connector pins; highly thixotropic for manual or automated dispensing	117,500	A63	70	4.1 [600]	1.4 [200]	1.8 Linear
9-318-F	•					Medium adhesion for peeling; blue fluorescing for black light inspection; silicone free	50,000	A55	130	2.0 [310]	3.0 [440]	1.9 Linear

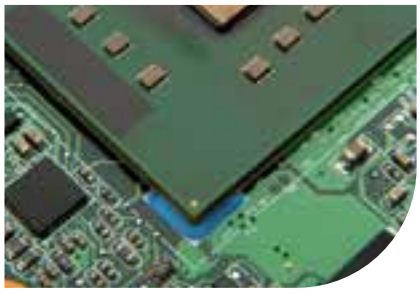
Featured Product



Product *	UV/Visible	LED	Moisture	Heat	Activator	Description	Nominal Viscosity, cP	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]	Shrinkage, %
OPTICAL BONDING – CAMERA MODULE, LASER, AND RADAR BONDING ADHESIVES												
3094-T-REV-A	•					Fast curing; low shrinkage and stress; designed to bond to a variety of plastics	11,750	D65	184	698 [101,300]	14 [2,000]	0.7 Linear
9801	•	•		•		Low shrinkage epoxy; low temp. heat cure (80-85°C); moisture & thermal cycle resistant; cold storage/ship; excellent bonds to LCP, PCB, PPS, and FPC	60,000	D90	2	1,600 [230,600]	45 [6,600]	1.5 Volumetric
9803	•	•		•		Very low shrinkage epoxy; low temp. heat cure (80-85°C); moisture & thermal cycle resistant; low water absorption; cold storage/ship	86,000	D94	1.2	3,983 [578,000]	36.7 [5,328]	1.1 Volumetric
OP-29-GEL	• uv					Multi-purpose optical adhesive; one component, no mixing required; gel viscosity forminimum movement after dispense; resists yellowing; low stress; flexible; optically clear, resilient	20,000	D65	80	200 [30,000]	24 [3,500]	0.79 Linear
OP-81-LS	•			•		Low shrinkage & low CTE epoxy; low temp. heat cure (80-85°C); moisture & thermal cycle resistant; cold storage/ship	60,000	D90	2	1,600 [230,000]	45 [6,600]	1.5 Volumetric
9671	•					Red color; highly thixotropic, halogen free; high bead profile for enhanced coverage; enhanced visibility; LCP bonding	45,000	D55	200	179.2 [26,000]	15.8 [2,100]	2.3 Linear
9701	•					Optical display adhesive; excellent re-workability; non-yellowing; low shrinkage; low viscosity; good thermal shock resistance; bonds to a variety of substrates	200	00-70	74	0.54 [79]	0.49 [71]	4.9 Volumetric
9702	•					Optical display adhesive; excellent re-workability; non-yellowing; low shrinkage; medium viscosity; good thermal shock resistance; bonds to a variety of surfaces	950	00-70	137	0.36 [52]	0.89 [129]	4.2 Volumetric
9703	•					Optical display adhesive; excellent re-workability; non-yellowing; low shrinkage; gel viscosity; good thermal shock resistance; bonds to a variety of surfaces	30,000	00-80	157	0.73 [106]	1.85 [268]	4.2 Volumetric
OP-29	• uv					Multi-purpose optical adhesive; one component, no mixing required; medium viscosity for gap filling; resists yellowing; low stress; flexible; optically clear, resilient	2,500	D60	110	234 [34,000]	22 [3,200]	0.79 Linear
OP-60	•					Precision positioning optical adhesives; low outgassing; low shinkage; low CTE; low moisure absorption; opaque; heat-cycle stable; non-movement during cure or thermal excursions	150,000	D80	2.4	1,008 [146,250]	33.7 [4,900]	0.8 Linear

Product *	UV/Visible	LED	Moisture	Heat	Activator	Description	Nominal Viscosity, cP	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]	Shrinkage, %
POTTING												
6-621-GEL	•			•	•	Forms hard, clear bonds to a variety of substrates including metal, glass, ceramic, and phenolic and filled plastics	25,000	D80	20	730 [106,000]	28 [4,000]	0.4 Linear
9-20557	•			•		Low modulus for thermal cycling performance; medium viscosity, designed to enhance wetting of leads; suitable for most types of spray equipment; blue fluorescing; approvals: MIL-I-46058C, UL 94V-1, UL 746, IPC-CC-830-B	2,300	D60	150	37.9 [5,500]	15.8 [2,300]	1.1 Linear
9-20558-REV-A	•			•		Flexible, thixotropic material; bonds well to FPCs; approvals: UL 94V-0	24,000	D35	160	2.3 [340]	6.2 [900]	1.8 Linear
6-621	•			•	•	Forms hard, clear bonds to a variety of substrates including metal, glass, ceramic, and phenolic and filled plastics; blue fluorescing (6-621-GEL-F only)	800	D80	37	550 [80,500]	22 [3,200]	0.4 Linear
6-621-GEL-F	•			•	•		27,000	D80	35	611 [88,700]	25.7 [3,700]	0.2 Linear
6-621-T	•			•	•		3,500	D80	20	730 [106,000]	28 [4,000]	0.4 Linear
921-T	• uv			•	•	Translucent potting resin for metals and plastics	3,000	D80	50	563 [82,000]	24 [3,600]	0.3 Linear
921-VT	• uv			•	•		11,500	D80	35	540 [78,450]	22 [3,200]	0.3 Linear
9008	•					Flexible material with excellent moisture resistance; ideal for COF applications; remains flexible to -40°C	4,500	D35	270	45 [6,500]	10 [1,500]	1.2 Linear

Featured Product



Product *	UV/Visible	LED	Moisture	Heat	Activator	Description	Nominal Viscosity, cP	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]	Shrinkage, %
RUGGEDIZING												
9309-SC	•					Formulated with See-Cure color-change technology; high viscosity; highly thixotropic; reduces stress on components; great adhesion to various PCB substrates	45,000	D57	140	163 [23,800]	22 [3,200]	1.2 Linear
9422-SC	•					Formulated with See-Cure color-change technology; highly thixotropic; reduces stress on components; great adhesion to various PCB substrates	38,000	D50	170	98 [14,000]	16 [2,300]	1.6 Linear
9773	•					BGA, CSP ruggedizing adhesive; meets ASTM E595 low outgassing; halogen and silicone free; low ionic content (Mil-Std 883 Method 5011 compliant); slump resistance at 90° up to 72 hours; jetting compatible; NASA MAPTIS material number 09907	54,000	D47	85	103 [15,000]	12 [1,700]	0.6 Linear
9422-T-SC	•					Formulated with See-Cure color-change technology; highly thixotropic; reduces stress on components; great adhesion to various PCB substrates	8,000	D50	170	98 [14,000]	16 [2,300]	1.6 Linear
WIRE TACKING												
9037-F	•			•		Flexible with excellent moisture and thermal resistance; blue fluorescing for easy inspection	55,000	D40	110	6.2 [900]	5.8 [850]	2.2 Linear
9-911-REV-B	•			•		High viscosity for optimal coverage of wires; solvent resistant; blue fluorescing; high bond strength to circuit board components; compatible with Dymax conformal coatings	25,000	D80	30	552 [80,000]	24 [3,500]	0.7 Linear
921-GEL	•			•	•	High tensile strength with excellent bonds to a wide variety of substrates including metal, glass, ceramic, and many thermoset plastics; clear	25,000	D80	30	583 [84,650]	25 [3,640]	0.2 Linear
921-T	•			•	•	High tensile strength with excellent bonds to a wide variety of substrates including metal, glass, ceramic, and many thermoset plastics; clear	3,000	D80	50	563 [82,000]	24 [3,600]	0.3 Linear
921-VT	•			•	•	High tensile strength with excellent bonds to a wide variety of substrates including metal, glass, ceramic, and many thermoset plastics; clear	11,500	D80	35	540 [78,450]	22 [3,200]	0.3 Linear

Featured Product

Product *	UV/Visible	LED	Moisture	Heat	Activator	Description	Nominal Viscosity, cP	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]	Shrinkage, %
BATTERY, MAGNET, PLASTIC, GLASS, METAL BONDING AND THERMAL INTERFACE												
431	•					High-temperature resistant; moisture resistant; high adhesion to glass and metal	500	D70	61	570 [82,000]	27 [3,900]	0.78 Linear
6-630-T	•			•	•	Moisture and high-temperature resistant; flexible; high adhesion to glass and metal; clear bonds	6,000	D70	130	413 [60,000]	28.2 [4,100]	0.5 Linear
7501-T-UR-SC-Z		•				TPO free; formulated with Encompass® technology; optimized for 385 or 405 nm LED curing; deeper section cure; red fluorescing	8,500	D73	160	855 [124,000]	20 [2,900]	0.3 Linear
9501-F	•	•				Structural bonder; 385 nm LED curing; excellent adhesion to metals and plastics; blue fluorescing	10,000	D65	142	545 [79,000]	17.2 [2,500]	0.6 Linear
9501-R	•	•				Structural bonder; red color; 385 nm LED curing; excellent adhesion to metals and plastics	8,600	D70	170	640 [92,200]	18.6 [2,700]	0.5 Linear
3013	•					Resilient, general purpose adhesive; blue fluorescing; moisture resistant	150	D70	70	350 [50,000]	18 [2,400]	0.9 Linear
3069	•					Flexible; adhesion to a wide variety of plastics	450	D55	175	170 [25,000]	17 [2,400]	2.1 Linear
3094	•					Low stress plastic bonder; low shrinkage	1,000	D62	170	240 [35,000]	14 [2,100]	0.2 Linear
3099	•					Plastic bonder; strong bonds to PMMA (Acrylic)	150	D75	220	917 [133,000]	21.4 [3,100]	0.3 Linear
3401	•		•			Plastic bonder with secondary moisture cure for shadow areas; moisure and thermal resistance; blue fluorescing	150	D55 - D75	13	506 [73,400]	30 [4,400]	0.2 Linear
4-20418	•					Low stress plastic and glass bonder; good thermal cycling performance	450	D60	200	246.8 [35,800]	20.6 [3,000]	0.4 Linear
4-20418-GEL	•						35,000	D60	130	689.5 [100,000]	11.4 [1,650]	-
4-20806	•					Non-yellowing dome coating; one-part system	1,750	A80	22	3.8 [555]	1.4 [205]	1.2 Linear

Featured Product

Product *	UV/Visible	LED	Moisture	Heat	Activator	Description	Nominal Viscosity, cP	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]	Shrinkage, %
BATTERY, MAGNET, PLASTIC, GLASS, METAL BONDING AND THERMAL INTERFACE												
429	UV					Optically clear; UV resistant; high impact; resistant to yellowing and thermal shock	2,500	D60	120	67 [9,770]	21.6 [3,140]	0.79 Linear
429-GEL	UV						20,000					
429-T	UV						5,000					
431-T	•					High-temperature resistant; moisture resistant; high adhesion to glass and metal	6,000	D70	86	439 [63,700]	24 [3,500]	0.5 Linear
846-GEL					•	Activator cured with 535-A-REV-A; exhibits good thermal shock and excellent adhesion to a wide variety of plated surfaces; excellent bonds to a wide variety of metal surfaces, glass, ceramic-filled nylon, thermoset plastics, and epoxy board	29,000	N/A	N/A	N/A	N/A	N/A
9-20801	UV			•	•	Highly conductive; thixotropic for easy dispense and placement; superior adhesion to FR4 and many metals	110,000	D85	N/A	760 [110,000]	14 [2,100]	0.4 Linear
501-E-REV-A						Activator; fixtures in seconds; cures Dymax Multi-Cure® structual adhesives; low volatility and high flash point	-	N/A	N/A	N/A	N/A	N/A

Surface Treatment Protection for OEM & MRO Processes

Aerospace engine components are being designed for longer engine service life, pushing the limits of existing technology. Dymax light-curable materials address the growing challenges and demands for new technologies for applications in the MRO and OEM sectors of the aerospace and defense industry. SpeedMask® light-curable maskants replace tape, wax, lacquers, and fixtures and offer reliable protection against most surface treatment processing environments. SpeedMask® UV/Visible maskants seal and protect machined, ground, or polished surfaces and contain no added solvents for a greener manufacturing process without solvent lacquers. SpeedMask® temporary maskants are removed by incineration during heat-treat or heat-tint operations, or by peeling.

Product Name	UV	UV/Visible	Characteristics	Nominal Viscosity, cP	Uncured Appearance	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]
SPEEDMASK® MASKANTS FOR TEMPORARY PROTECTION								
728-G		•	High adhesion; excellent surface protection to aggressive chemical processes; easy removal after hot-water soak; sprayable	25,000	Green/Blue Gel	D55	265	55 [8,024]
740-BT		•	Low-medium adhesion; compatible with MEK-based and heat-cure paint	50,000	Blue Gel	D25	203	2.42 [350]
750		•	High adhesion; hard and durable; cures tack free; resilient to blast media; sprayable	30,000	Translucent Pink Gel	A50	140	2.5 [370]
750-SC		•	Turns purple to pink after sufficient exposure to UV/Visible light; sprayable; high adhesion	30,000	Translucent Purple Gel	A85	124	29 [4,250]
758-H		•	High adhesion; LED (405 nm) optimized; secondary heat cure; low shrinkage; trimmable after cure; resistant to nitric and hydrochloric acid	10,000	Red Gel	A80	140	2.3 [330]
7602	•	•	Moderate adhesion; color change on cure; trimmable; resistance to strong acid solutions and etchants; optimized to cure with LED	26,000	Translucent Pink Gel	A76	185	60.4 [8,757]
706	•		High adhesion; excellent surface and cavity protection; hard/durable; chemical resistance	47,500	Colorless Gel	D75	5.5	965 [140,000]
707	•		Prevents beam impingement; secondary heat cure; reduces spatter; hard/durable	500	Colorless Gel	D70	71	270 [39,000]
718		•	High adhesion; resists flame spray processes; excellent surface and cavity protection during APS and HVOF	46,000	White Paste	D80	3	965 [140,000]
724		•	Good surface protection; fast curing; easy peel off	70,000	Colorless Gel	D40	200	2.7 [390]
728-G-LV		•	Low viscosity; high adhesion; acid resistant; easy peel after hot-water soak; spray or dip	2,500	Blue/Green Transparent Gel	D60	260	293 [42,500]
729	•		High adhesion; hard/durable; resists acids; spray or dip	20,000	Colorless Gel	D75	19	289 [42,000]
731-REV-A		•	High adhesion; fluoresces yellow; sprayable; easy peel after hot-water soak	18,000	Bright Yellow Gel	D55	300	28 [4,200]
733-G-REV-A		•	Sprayable; resilient to blasting media; reliable protection during TBC processing	25,000	Green Translucent Gel	D50	294	193 [27,960]
734-BT		•	Moderate adhesion; acid resistance (Nitric, Sulfuric, and Hydrochloric); easy peel off; trimmable after cure	24,000	Blue Gel	D25	235	35 [5,044]
7701		•	Moderate adhesion; excellent surface protection; flexible after heat exposure; easy peel off; spray or dip	45,000	Colorless Translucent Gel	D30	225	7.6 [1,100]
LIGHT-CURABLE COATING FOR PERMANENT PROTECTION								
7502	•		High adhesion; reliable surface protection against environmental conditions, i.e. salt or moisture; spray or dip	20,000	Colorless Gel	D70	30	240 [35,000]

Featured Product

Process Guide

SpeedMask® maskants provide excellent surface protection during aggressive finishing processes including sand blasting, acid stripping, anodizing, machining, and more.

		Chemical Processes				Coatings			Media Finishing			Manufacturing Aids			
Product Name	Removal Options	Anodizing	Plating	Acid Stripping	Chemical Etching	Air Plasma Spray	HVOF	Painting & Powder Coatings	Grit Blasting	Shot Peening	Vibratory Finishing	Machining	Buffing/ Polishing	Airflow Testing	Laser Drilling
SPEEDMASK® MASKANTS FOR TEMPORARY PROTECTION															
728-G	Peelable or Incineration	•	•	•					•	•	•	•	•		
740-BT	Peelable							•	•						
750	Peelable or Incineration					•	•		•						
750-SC	Peelable or Incineration	•	•			•	m		•						
758-H	Peelable or Incineration		•	•					•						
7602	Peelable	•	•	•					•						
706	Incineration			•		•						•			
707	Incineration														•
718	Incineration					•	m								
724	Peelable							•	•	•				•	
728-G-LV	Peelable or Incineration		•	•								•	•		
729	Incineration		•	•											
731-REV-A	Peelable or Incineration	•	•						•	•	•				
733-G-REV-A	Peelable or Incineration					•			•	•					
734-BT	Peelable or Incineration	•	•	•					•						
7701	Peelable or Incineration	•	•					•	•	•					
LIGHT-CURABLE COATING FOR PERMANENT PROTECTION															
7502	N/A														

Featured Product • Recommended m Limited applications *Decorative etching

OPTICAL ASSEMBLY ADHESIVES

Dymax offers a complete line of high-performance light-curable adhesives and light-curing equipment for optical applications for the industrial, commercial, medical, military, aerospace, and electro-optical markets. Over 40 years of experience in this industry has led to a superior product line of adhesives, applicators, and UV light-curing sources.

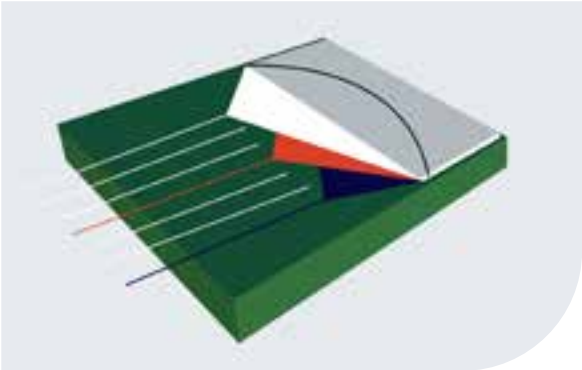
Dymax high-strength, low-stress, OP-Series optical assembly adhesives cure in seconds upon exposure to UV/Visible light. Dymax optical adhesives are single component, low outgassing, low shrinkage, and have gap-filling capabilities. High-performance fiber optic adhesives minimize movement of parts during cure. These product require room temperature 10-32°C (50-90°F) storage.

Typical Applications

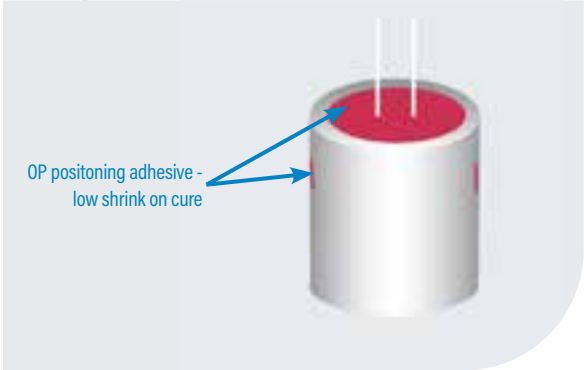
- Diode Assembly
- Lens Bonding
- Lens Laminating
- Prism Curing
- VCSEL Potting
- Fiber Optic Bonding
- Lens Positioning
- LiDAR Assembly
- Camera Module Bonding

Product	Description	Shrinkage	Refractive Index (Cured)	Viscosity, cP	Durometer Hardness*
OP-81-LS	Off white/opaque epoxy; UV/visible light cure or LED curable; low temp heat cure that can be used as the sole cure mechanism or secondary for shadow areas; low shrinkage; low CTE	1.50% Volumetric	N/A	60,000	D90
OP-24-REV-B	Clear; Multi-Cure® (UV/light/heat/activator); tack and bond with UV, heat, or activator where light won't reach; lens mounting	0.39% Linear	1.50	800	D80
OP-29	Clear; UV light cure; flexible; resists yellowing; low stress; good for doublet bonding, lens mounting, or fiber optic splicing	0.79% Linear	1.50	2,500	D60
OP-29-GEL	Clear; UV light cure; flexible; resists yellowing; low stress; gel viscosity for minimum movement after dispense; good for doublet bonding, lens mounting, or fiber optic splicing	0.79% Linear	1.50	20,000	D65
OP-60	Opaque; low shrinkage; low outgassing; low CTE; good for precise positioning of lenses, prisms, and other optical components	0.80% Linear	N/A	150.000	D80

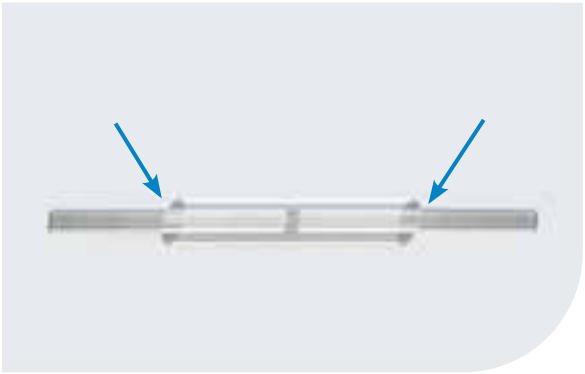
*D = Rigid / A = Elastic / OO = Soft



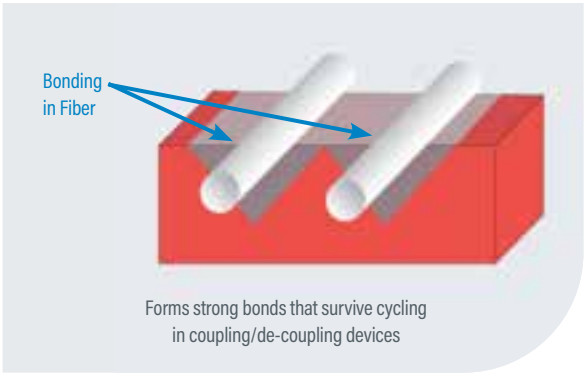
Wavelength Division Multiplexing Bonding Fibers and Diffraction Gratings



Positioning Laser Diodes (VCSEL's)



Fiber Optic Through Ferrule or Fiber Pigtailing



Fiber Optic "V" Grove Bond

Product	Tg, Glass Transition Temperature °C (By DMA)	Tensile Bar Strength ASTM D638			Adhesion			
		Tensile, psi [MPa]	Modulus of Elasticity, psi [MPa]	Elongation	Ceramic	Glass	Metal	Plastic
OP-81-LS	153 u	45 [6,600]	1,600 [230,600]	2%	❍	❍	●	●
OP-24-REV-B	79 u	5,200 [36]	320,000 [2,206]	35%		●	●	●
OP-29	64 u	3,000 [22]	34,000 [234]	110%		●	●	❍
OP-29-GEL	56 u	3,500 [24]	30,000 [200]	80%		●	●	❍
OP-60	114 u	4,900 [34]	146,250 [1,008]	2.4%	●	●	●	●

u = UV-only cure ● Recommended ❍ Limited applications

INDUSTRIAL ADHESIVES

Products for Bonding Plastic

Product	Chemistry	Characteristics	Applications	Uncured Appearance
PLASTIC				
3013-T	UV/Visible	Blue fluorescing; resilient; general purpose; moisture resistant	Bond and joint sealing, plastic window bonding, appliance assembly, plastic assembly	Light Yellow
3099-VT	UV/Visible	Strong bonds to PMMA (acrylic), polycarbonate, glass, and other plastics	Display assembly, plastic housing assembly, appliance assembly	Light Yellow
3013 **3013-GEL**	UV/Visible	Blue fluorescing; resilient; general purpose; moisture resistant	Bond and joint sealing, plastic window bonding, appliance assembly, plastic assembly	Light Yellow
3069	UV/Visible	Rapid laminating and bonding of flexible and rigid substrates; adhesion to wide variety of plastics	Flexible lamination, plastic housing assembly, appliance assembly, speaker assembly	Colorless
3094	UV/Visible	Low stress plastic bonder; low shrinkage	Sign assembly; plastic assembly; household appliance assembly	Light Yellow
3099 **3099-T**	UV/Visible	Strong bonds to PMMA (acrylic), polycarbonate, glass, and other plastics	Display assembly, plastic housing assembly, appliance assembly	Light Yellow
3401	UV/Visible	UV- and LED-curable PC and ABS bonder with secondary moisture cure; blue fluorescing; shadow area performance; moisture and thermal resistance; jetting compatible	Plastic assemblies, appliance assemblies, bonding, sealing, or encapsulating PC or ABS components, automotive applications	Colorless
PLASTIC + METAL/GLASS				
3094-GEL-REV-A	UV/Visible	Adhesion to many plastics including LCP; low shrinkage; low stress bonder; LED curable	CCM assembly, plastic assembly, household appliance assembly	Colorless
3094-T-REV-A	UV/Visible	Adhesion to many plastics including LCP as well as glass and metals; low shrinkage; low stress bonder; LED curable	CCM assembly, plastic assembly, household appliance assembly	Light Yellow
DOME COATINGS				
4-20806	UV/Visible	Non-yellowing; fast curing; clear; low dome profile; flexible and rigid substrate applications; suitable for indoor and some outdoor applications	Dome coating of polycarbonate and PVC nametags	Colorless

Featured Product

Product	Viscosity, cP (20 rpm) Nominal	Durometer Hardness	Tensile at Break, MPA [psi]	Elongation at Break, %	Linear Shrinkage, %	Water Absorption, % (25°C, 24h)
PLASTIC						
3013-T	6,250	D70	19 [2,766]	127	0.48	1.50
3099-VT	15,000	D75	19 [2,800]	170	0.4	8.4
3013	150	D70	18 [2,400]	70	0.9	1.6
3013-GEL	27,000	D70	19.9 [2,885]	144	0.58	1.49
3069	450	D55	17 [2,400]	175	2.1	1.6
3094	1,000	D62	14 [2,100]	170	0.2	22
3099	150	D75	19 [2,800]	170	0.4	8.4
3099-T	10,000	D75	19 [2,800]	170	0.4	8.4
3401	150	D55-D75	30 [4,400]	13	0.2	0.7
PLASTIC + METAL/GLASS						
3094-GEL-REV-A	30,000	D67	12.4 [1,800]	200	0.5	22
3094-T-REV-A	11,750	D65	14 [2,000]	184	0.7	6.5
DOME COATINGS						
4-20806	1,750	A80	1.4 [205]	22	1.2	1.2

Featured Product

Products for Bonding Glass and Metal

Product	Chemistry	Characteristics	Applications	Uncured Appearance
GLASS				
431	UV/Visible	LED curable; high-temperature and moisture-resistant glass-to-metal bonder; low shrinkage	Glass-to-glass assembly, glass-to-metal assembly, appliance and lighting sub-assemblies, furniture	Colorless
429	UV	LED curable; optically clear structural adhesive for large areas; high impact; resistant to yellowing and thermal shock	Glass-to-metal bonding, potting critical components, large-area bonding	Colorless to Light Yellow
429-GEL				
429-T				
431-T	UV/Visible	LED curable; high-temperature and moisture-resistant glass-to-metal bonder; low shrinkage	Glass-to-glass assembly, glass-to-metal assembly, appliance and lighting sub-assemblies, furniture	Colorless
4-20418	UV/Visible	Low-stress plastic and glass bonder; rapid bonding and laminating to glass, metal, and many plastics	Glass, plastic, and metal bonding and laminating	Colorless
4-20418-GEL				
METAL + GLASS + PLASTIC				
6-621-GEL	UV/Visible, Heat, Activator	LED curable; adhesive for phenolic and filled plastics, glass, and metal; hard, clear bonds	Metal-to-glass bonding, coil winding, potting	Colorless
6-630-T	UV/Visible, Heat, Activator	LED curable; flexible; high temperature and moisture resistant; high adhesion to glass and metal; clear bonds	Glass fixtures and furniture, consumer packaging, structural glass assemblies, potting, automotive latches	Colorless
7501-T-UR-SC-Z	UV/Visible	Encompass® technology; visual cure confirmation; TPO free; Ultra-Red® fluorescing; optimized for 405 nm cure	Sealing critical automotive components and assemblies	Blue
6-621	UV/Visible, Heat, Activator	LED curable; adhesive for phenolic and filled plastics, glass, and metal; hard, clear bonds	Metal-to-glass bonding, coil winding, potting	Colorless
6-621-GEL-F				
6-621-T				
6-630	UV/Visible, Heat, Activator	LED curable; flexible; high temperature and moisture resistant; high adhesion to glass and metal; clear bonds	Glass fixtures and furniture, consumer packaging, structural glass assemblies, potting, automotive latches	Colorless
7502	UV	Anti-corrosion protective resin; excellent surface protection from environmental conditions like moisture and salt	Sealing critical automotive components and assemblies	Colorless
METAL				
846-GEL	Activator	Low-volatility, high-strength structural adhesive; bonds dissimilar substrates; tough durable bonds; good thermal shock characteristics; use with 501-E or 535-A activators	Metal frame bonding, metal-to-stone assembly, loudspeaker hardware assembly, D.C. motor assembly, magnet bonding	Translucent Straw
501-E-REV-A	N/A	Activator for fast, reliable structural bonding; fixtures in 15-20 seconds; no solvent flash-off time; no VOCs and ODCs	Use with Dymax 600 & 800 series adhesives for increasing bond strength to metal, ceramic, & glass	Yellow to Amber

Featured Product

Product	Viscosity, cP (20 rpm) Nominal	Durometer Hardness	Tensile at Break, MPa [psi]	Elongation at Break, %	Linear Shrinkage, %	Water Absorption, % (25°C, 24h)
GLASS						
431	500	D70	27 [3,900]	61	0.78	1.5
429	2,500	D60	21.6 [3,140]	120	0.79	1.1
429-GEL	20,000	D60	20.7 [3,000]	120	TBD	1.2
429-T	5,000	D60	20.7 [3,000]	120	TBD	1.2
431-T	6,000	D70	24 [3,500]	86	0.5	3.4
4-20418	450	D60	20.6 [3,000]	200	0.4	4.4
4-20418-GEL	35,000	D60	11.4 [1,650]	130	TBD	4.1
METAL + GLASS + PLASTIC						
6-621-GEL	25,000	D80	28 [4,000]	20	0.4	1.7
6-630-T	6,000	D70	28.2 [4,100]	130	0.5	1.5
7501-T-UR-SC-Z	8,500	D73	20 [2,900]	160	0.3	2.6
6-621	800	D80	26 [3,700]	19	0.3	1.5
6-621-GEL-F	27,000	D80	5.7 [3,700]	35	0.2	1.4
6-621-T	3,700	D80	23 [3,300]	45	1.0	1.4
6-630	500	D70	22.4 [3,250]	93	0.5	4.4
7502	20,000	D70	22 [3,200]	30	0.4	0.4
METAL						
846-GEL	29,000	NA	19 [2,800]	NA	NA	NA
501-E-REV-A	N/A	NA	NA	NA	NA	NA

Featured Product

Substrate Bonding Guide - Plastic Bonders

	ABS	CAP	COPE	EP	HDPE/LDPE	PA	PC	PCTG	PEBA	PET	PETG	PI	PMMA	PP	PS	PSU	PU	PVC	SB	SAN	TPU	AL	Brass	Ceramic	Copper	Cold Rolled Steel	FR-4	Glass	SS
PLASTIC																													
3013-T	●	●	●				●			●		●	●		●		●	●			●								●
3099-VT	●						●	●			●		●		❍	●	❍	●	●	●								●	
3013	●	●	●				●			❍		●	●		●		●	●		❍	●								●
3013-GEL	●	●	●				●			●		●	●		●		●	●		●	●								●
3069	●		●				●		●	●	●		❍		●		●	●											
3094	●					●	●	❍		●	●	●	●		●	●	●	●		●								❍	❍
3099	●						●	●			●		●		❍		❍	●	●	●								●	
3099-T	●						●	●			●		●		❍	●	❍	●	●	●								●	
3401	●						●	●					●				●	●		●	●		●				●	●	
PLASTIC + METAL/GLASS																													
3094-GEL-REV-A	●					●	●	●		●	●	❍	●		●		●	●		●								●	●
3094-T-REV-A	●					●	●	●		●	●	❍	●		●		❍	●		●									
DOME COATINGS*																													
4-20806	●						●						●									●				●		●	●

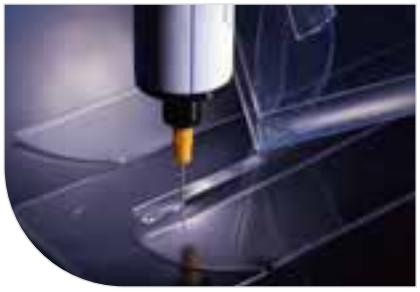
Featured Product

● Recommended adhesive

❍ Limited applications

ST Requires surface treatment (e.g., plasma, corona treatment, etc.)

*Substrate adhesion for dome coatings is application dependent.



Substrate Bonding Guide - Glass and Metal Bonders

	AL	Brass	Ceramic	Copper	Cold Rolled Steel	FR-4	Glass	SS	ABS	CAP	EP	HDPE/LDPE	PA	PC	PCTG	PEBA	PEEK	PEI	PET	PETG	Phenolic Plastic	PI	PMMA	PP	PPO	PS	PU	PVC	SAN	TPU
GLASS																														
431	●	●	●	●		●	●	●	●	●			●	●	●	●	●		●	●		●						●	●	
429	❍				❍		●	❍	●					❍									❍						●		
429-GEL	❍				❍		●	❍	●					❍									❍						●		
429-T	❍				❍		●	❍	●					❍									❍						●		
431-T	●		●	●			●	●					●	●					●				●			●	●			
4-20418	●	●			●		●		●	●		ST	●	●	●		●	●	●	●		●	●	ST	●	●		●	●	●
4-20418-GEL							●		●						●					●			●			●	●	●	●	
METAL + GLASS + PLASTIC																														
6-621-GEL	●		●	●	●		●	●	●		●		●	❍				❍	❍		●	❍					❍	❍		
6-630-T	●						●	●	●								●	●										●		
7501-T-UR-SC-Z								●	●					●	●			●	●				●			●	●	●	●	●
6-621	●		●	●	●		●	●	●		●		●	❍				❍	❍		●	❍					❍	❍		
6-621-GEL-F	●		●	●	●		●	●	●		●		●	❍				❍	❍		●	❍					❍	❍		
6-621-T	●		●	●	●		●	●	●		●		●	❍				❍	❍		●	❍					❍	❍		
6-630	●		●				●	●	●				●									●				●		●		
7502	●																													
METAL																														
846-GEL	●	●		●	●	●	●	●	●															ST						

Featured Product

● Recommended adhesive

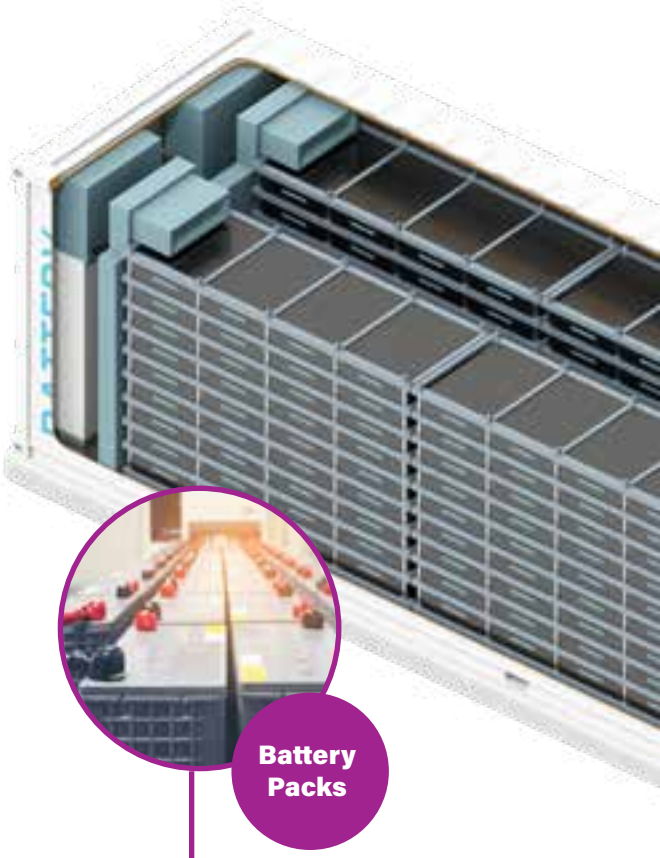
❍ Limited applications

ST Requires surface treatment (e.g., plasma, corona treatment, etc.)

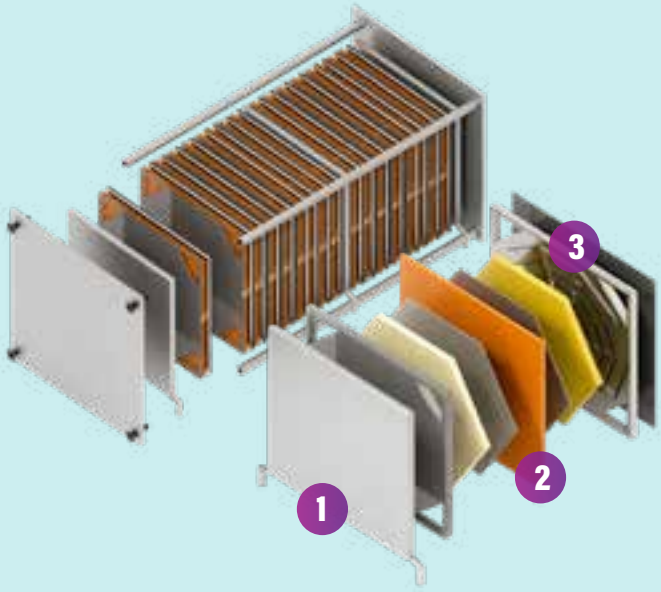
LCMS FOR ENERGY APPLICATIONS

Typical Applications

Fuel Cells



Fuel Cell Stack



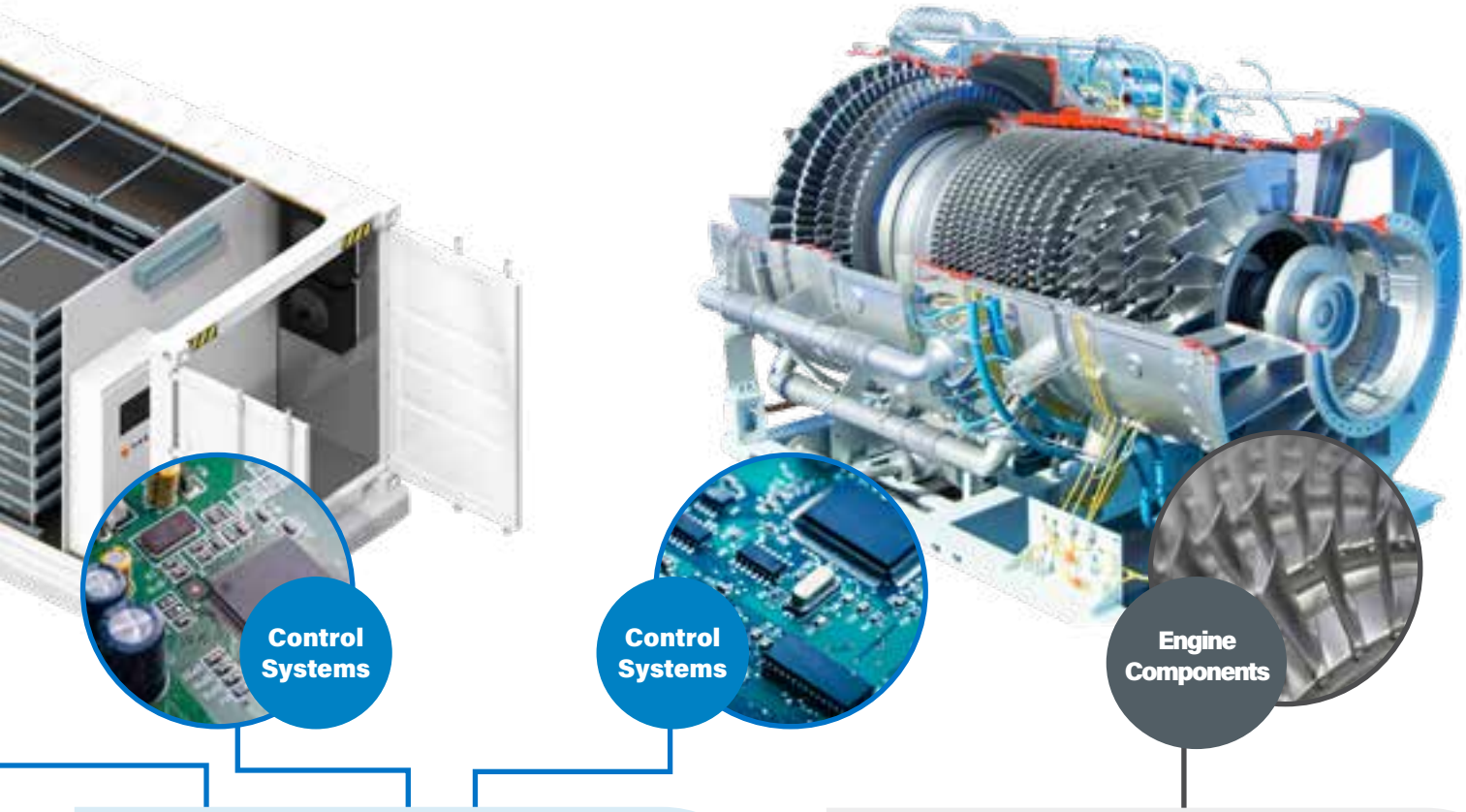
1. Structural Adhesive | 2. Protective Coating | 3. Sealant/Gasket

Battery Pack Applications

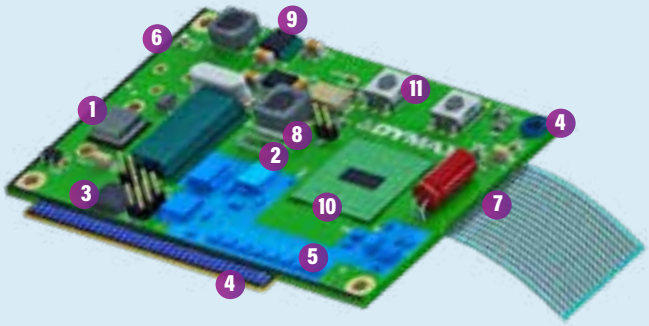
1. Fixture Battery Components | 2. Seal Housings

Energy Storage Systems (Stationary)

Industrial Gas Turbines



Printed Circuit Board Applications



1. Thermal Interface Material
2. Wire Tacking
3. Glob Top Encapsulant
4. Peelable Mask
5. Conformal Coating
6. Cure-in-Place Gasket
7. Strain Relief
8. Staking
9. Encapsulation
10. Ruggedization/Cornerbond
11. Reinforcement

Additional Applications – Inductors & Transformers - Magnet Bonding

Surface Protection of Engine Components

- Compressor Blades & Vanes
- Compressor Lines & Cases
- Turbine Disks
- Fan Blades
- Combustion Cases
- Combustion Liners
- Nozzle Guide Vanes
- Stacked Vanes
- Many, Many More Components

Processes: Anodizing | Acid Stripping | Chemical Etching | Plating | Air Plasma | HVOF | Painting | Grit Blast | Shot Peening | Machining | Air Flow Testing | Laser Drilling

Fuel Cells

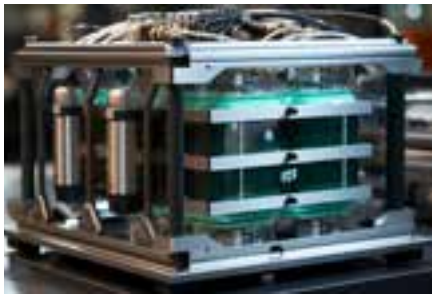
Fuel cell technology is the production of electricity generated from fuel that is oxidized through electrochemical energy conversion. Many systems include SOFC (Solid Oxide Fuel Cells), PEMFC (Proton Exchange Membrane Fuel Cells), and SOEC (Solid Oxide Electrolyzer Cells) that enable them to operate efficiently.

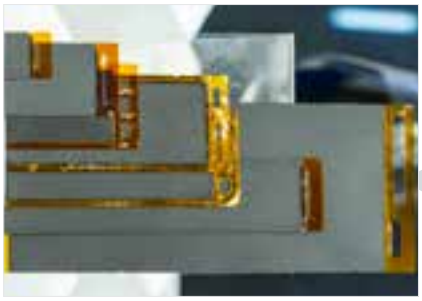
Fuel cell manufacturers and assemblers who are bonding, gasketing, coating, and sealing parts in SOFC and PEMFC fuel cell plates and stacks and solid oxide electrolyzers need solutions that prevent degradation due to high operating temperatures and stress, the ability to join different materials, and provide stability during operation.

Our products include adhesives that form strong bonds to dissimilar substrates that enhance components' structural integrity and mechanical support, gasket sealants that shield assemblies from contaminants and prevent leaks, encapsulants and coatings that protect electronics and stake surfaces from extreme environmental conditions, and maskants that offer secure protection during finishing processes.

Product	UV/Visible	LED	Heat	Moisture	Activator	Description	Nominal Viscosity, cP	Uncured Appearance	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]	Shrinkage, % (Linear)
SOEC (Solid Oxide Electrolyzer Cells) | SOFC & PEMFC (Solid Oxide & Proton-Exchange Membrane Fuel Cells)													
6-621	•		•		•	Structural Adhesive; forms hard, clear bonds to a variety of substrates including metal, glass, ceramic, and phenolic and filled plastics	800	Clear Translucent	D80	37	550 [80,500]	22 [3,200]	0.04
750	•					Protective Coating; high adhesion; hard and durable; cures tack free; resilient to blast media; sprayable; recommended surfaces include nickel and titanium alloys and cobalt chrome	30,000	Translucent Pink Gel	A50	140	2.5 [370]	3.6 [530]	1.3
750-SC	•					Protective Coating & Sealant; turns purple to pink after sufficient exposure to UV/Visible light; sprayable; high adhesion; recommended surfaces include nickel and titanium alloys and cobalt chrome	30,000	Translucent Purple Gel	A85	124	29 [4,250]	4.5 [659]	1.5
GA-140	•					Sealant (Gasket); moisture and chemical resistant; cures soft and tack free; low outgassing; adhesion to plastics, most metals and nylon	39,000	Colorless Translucent Gel	A35	167	0.71 [140]	1.5 [211]	2
GA-201	•					Gasketing/Sealing; tack free after proper cure; moisture and chemical resistant; UL 157 Certified; adhesion to plastics and plated surfaces	65,000	Opaque Gel	A35	165	0.75 [110]	0.93 [135]	1.1

Featured Product **SC** See-Cure Technology





	Chemical Processes						Recommended Substrates																		
	Air Plasma Spray	Anodizing	Grit Blasting	HVOF	Plating	Thermal Spray	ABS	EP	PA	PC	PEI	PET	Phenolic Plastic	PI	PMMA	PU	PVC	AL Aluminum	Brass	Ceramic	Copper	Cold Rolled Steel	Glass: borosilicate, quartz, mica	Stainless Steel
SOEC (Solid Oxide Electrolyzer Cells) | SOFC & PEMFC (Solid Oxide & Proton-Exchange Membrane Fuel Cells)																								
6-621						•	•	•	❍	❍	❍	•	❍		❍	❍		•	•	•	•	•	•	
750	•		•	•																				
750-SC	•	•	•	•	•																			
GA-140						•			•					•		•					•		•	
GA-201																	•					•	•	

• Recommended ❍ Limited applications

Energy Storage Systems (Stationary)

Stationary energy storage systems (ESS) are designed to store energy for later use, can be charged and discharged multiple times, and are integral to managing, optimizing, and stabilizing energy flows within power grids. Large-scale battery packs and auxiliary power units are two primary types of standalone ESS that provide long-duration energy storage, extended backup power, and enhanced energy utilization efficiency. These systems use control systems comprised of actuators, controllers, and sensors to manage their continuous operation. Dymax solutions include:

High-strength structural bonding adhesives to firmly secure battery packs and enclosures, preventing loosening or detachment of parts due to vibration, shock, or thermal expansion

Conformal coatings to shield critical printed circuit components from damaging environmental conditions

Encapsulants that provide good moisture and corrosion protection for electronic components

Form-in-place gasketing sealants to create airtight and chemically resistant seals against moisture, dust, and other environmental contaminants, protecting sensitive internal components under thermal cycling and mechanical stresses.

Product	UV/Visible	LED	Heat	Moisture	Activator	Description	Nominal Viscosity, cP	Uncured Appearance	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]	Shrinkage, % (Linear)
Auxiliary Power Units & Battery Packs													
7501-T-UR-SC-Z		•				Structural Adhesive; TPO free; Encompass® technology; visual cure confirmation; Ultra-Red® fluorescing; optimized for 405 nm cure; bonds to tin-plated brass	8,500	Blue Translucent, Colorless	D73	160	855 [124,000]	20 [2,900]	0.3
9501-F	•	•				Structural Adhesive; excellent adhesion to plastics, metals, and dissimilar substrates; blue fluorescing; 385 nm LED curing; bonds to nickel plated metals	10,000	Colorless Transparent	D65	142	545 [79,000]	17.2 [2,500]	0.6
GA-140	•					Sealant (Gasket); moisture and chemical resistant; cures soft and tack free; low outgassing; adhesion to plastics, most metals and nylon	39,000	Colorless Translucent Gel	A35	167	0.71 [140]	1.5 [211]	2
GA-201	•					Gasketing/Sealing; tack free after proper cure; moisture and chemical resistant; adhesion to plastics and plated surfaces	65,000	Opaque Gel	A35	165	0.75 [110]	0.93 [135]	1.1

Featured Product **SC** See-Cure Technology **UR** Ultra-Red® Technology **Z** TPO Free

	Recommended Substrates																						
	ABS	CAP	Kapton	Lead Frame	PC	PCB	PC/ABS Blend	PCTG	PEI	PETG	PMMA	PS	PSU	PU	PVC	SAN	Silicon	TPU	AL	Ceramic	Cold Rolled Steel	FR-4	Glass	Stainless Steel
Auxiliary Power Units & Battery Packs																								
7501-T-UR-SC-Z	•				•				•		•	•	•	•	•	•		•						•
9501-F	•	•			•		•	•		•		•			•	•			•			•	•	•
GA-140	•				•						•				•						•			•
GA-201																			•				•	•

• Recommended ❍ Limited applications

Product	UV/Visible	LED	Heat	Moisture	Activator	Description	Nominal Viscosity, cP	Uncured Appearance	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]	Shrinkage, % (Linear)
Control Systems													
9014	UV Only			•		Encapsulant; UV light curing with secondary moisture cure for shadow areas; flexible	18,000	Light Yellow Translucent Gel	D51	63	119 [17,300]	8.2 [1,200]	1.8
9309-SC	•					Ruggedization Adhesive; formulated with See-Cure color-change technology; high viscosity; highly thixotropic; reduces stress on components; great adhesion to various PCB substrates	45,000	Blue Transparent Gel	D57	140	163 [23,800]	22 [3,200]	1.2
9422-SC	•					Reinforcement Adhesive; See-Cure Technology; fast room-temperature cure; reduces stress on board components; thixotropic for minimized movement after dispense	38,000	Blue Transparent Gel	D50	170	98 [14,000]	16 [2,300]	1.6
9483-Z	•	•				Conformal Coating; excellent thermal shock resistance; corrosion resistant; blue fluorescing; MIL-I-46058C, IPC-CC-830-B, UL 94V-0, UL 746E	750	Clear, Light Yellow	D60	19	480 [70,000]	10.3 [1,500]	2.0
9-20558-REV-A	•		•			Encapsulant; UV/Visible light curing with secondary heat cure; high viscosity; flexible; bonds well to FPCs	24,000	Light Yellow Translucent Gel	D35	160	2.3 [340]	6.2 [900]	1.8
3094	•					Structural Adhesive; plastic bonder; low shrinkage and stress	1,000	Light Yellow Translucent Gel	D62	170	240 [35,000]	14 [2,100]	0.2
6-621	•		•		•	Structural Adhesive; forms hard, clear bonds to a variety of substrates including metal, glass, ceramic, and phenolic and filled plastics	800	Clear Translucent	D80	37	550 [80,500]	22 [3,200]	0.4
9-911-REV-B	•		•			Wire-Tacking Adhesive; UV/Visible light curing with secondary heat cure; solvent resistant; blue fluorescing	25,000	Clear Translucent Gel	D80	30	552 [80,000]	24 [3,500]	0.7
9008	•					Encapsulant; moisture resistant; remains flexible to -40C; Ideal for COF applications	4,500	Light Yellow Transparent	D35	270	45 [6,500]	10 [1,500]	1.2
9422-T-SC	•					Reinforcement Adhesive; See-Cure Technology; fast room-temperature cure; reduces stress on board components; thixotropic for minimized movement after dispense	8,000	Blue Transparent	D50	170	98 [14,000]	16 [2,300]	1.6

Featured Product **SC** See-Cure Technology **T** Thick

	Recommended Substrates																							
	ABS	CAP	Kapton	Lead Frame	PC	PCB	PC/ABS Blend	PCTG	PEI	PETG	PMMA	PS	PSU	PU	PVC	SAN	Silicon	TPU	AL	Ceramic	Cold Rolled Steel	FR-4	Glass	Stainless Steel
Control Systems																								
9014			●																			●	●	
9309-SC				●		●											●			●				
9422-SC				●		●											●			❍				
9483-Z	●			●		●														●		●		
9-20558-REV-A					❍					❍					●									
3094	●				●			❍		●	●	●	●	●	●	●							❍	❍
6-621	●				❍				❍					❍	❍				●	●	●	●	●	●
9-911-REV-B				●		●											❍			❍				
9008			●																	●		●	●	
9422-T-SC				●		●											●			❍				

● Recommended ❍ Limited applications

Industrial Gas Turbines

An industrial gas turbine (IGT) converts fuel into mechanical energy that drives a generator to produce electricity. IGT engines comprise compressors, combustors, turbines, shafts, and nozzles, while the control systems include sensors, actuators, and controllers that manage their operation.

- Adhesives provide structural integrity to various substrates, including metals and plastics, essential for components subjected to operational stress.
- Coatings and encapsulants exhibit high-temperature resistance and maintain their properties under extreme thermal conditions.
- Maskants protect parts from surface finishing processes, especially high-value components made from nickel superalloys and high-temperature steel.
- The broad compatibility of light-curable materials with various substrates allows for seamless integration into diverse stages of the turbine assembly process, ensuring strong and reliable bonds.

Product	UV/Visible	LED	Heat	Moisture	Activator	Description	Nominal Viscosity, cP	Uncured Appearance	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]	Shrinkage, % (Linear)
Engine Components													
750	•					Protective Coating; high adhesion; hard and durable; cures tack free; resilient to blast media; sprayable; recommended surfaces include nickel and titanium alloys and cobalt chrome	30,000	Translucent Pink Gel	A50	140	2.5 [370]	3.6 [530]	1.3
750-SC	•					Protective Coating & Sealant; Turns purple to pink after sufficient exposure to UV/Visible light; sprayable; high adhesion; recommended surfaces include nickel and titanium alloys and cobalt chrome	30,000	Translucent Purple Gel	A85	124	29 [4,250]	4.5 [659]	1.5
758-H	•	•	•			Acid Stripping Coating Mask; high adhesion; LED (405 nm) optimized; secondary heat cure; low shrinkage; trimmable after cure; resistant to nitric and hydrochloric acid; recommended surfaces include nickel and titanium alloys	10,000	Red Gel	A80	140	2.3 [330]	3.4 [500]	1.7
706	UV Only					Acid Strip and Thermal Coating Maskant; high adhesion; hard and durable; sprayable; recommended surfaces include nickel super alloys and high-temperature steel	42,500	Colorless Translucent Gel	D75	5.5	965 [140,000]	55 [8,000]	0.4
718	•					Thermal-Spray Coating Maskant; high adhesion; hard and durable; resists flame-spray processes; recommended surfaces include nickel super alloys and high-temperature steel	46,000	Opaque Gel	D80	3	965 [140,000]	41 [6,000]	0.3
7602	•	•				Protective Plating Maskant; Color change upon cure; blue fluorescing; moderate adhesion; trimmable after cure; resistant to strong acid solutions and etchants	26,000	Pink Translucent Gel	A76	185	60.4 [8,757]	6 [872]	1.49

Featured Product **SC** See-Cure Technology

	Finishing Processes					
	Acid Stripping	Air Plasma Spray	Anodizing	Grit Blasting	HVOF	Plating
Engine Components						
750		•		•	•	
750-SC		•	•	•	•	
758-H	•			•		•
706	•	•				
718		•			•	
7602	•		•	•		•

• Recommended ❍ Limited applications

Product	UV/Visible	LED	Heat	Moisture	Activator	Description	Nominal Viscosity, cP	Uncured Appearance	Durometer Hardness	Elongation at Break, %	Modulus of Elasticity, MPa [psi]	Tensile at Break, MPa [psi]	Shrinkage, % (Linear)
Control Systems													
9-20558-REV-A	•		•			Encapsulant; UV/Visible light curing with secondary heat cure; high viscosity; flexible; bonds well to FPCs	24,000	Light Yellow Translucent Gel	D35	160	2.3 [340]	6.2 [900]	1.8
9014	UV Only			•		Encapsulant; UV light curing with secondary moisture cure for shadow areas; flexible	18,000	Light Yellow Translucent Gel	D51	63	119 [17,300]	8.2 [1,200]	1.8
9037-F	•		•			Encapsulant; flexible with excellent moisture and thermal resistance; blue fluorescing for easy inspection	55,000	Translucent Gel	D40	110	6.2 [900]	5.8 [850]	2.2
9309-SC	•					Ruggedization Adhesive; formulated with See-Cure color-change technology; high viscosity; highly thixotropic; reduces stress on components; great adhesion to various PCB substrates	45,000	Blue Transparent Gel	D57	140	163 [23,800]	22 [3,200]	1.2
9422-SC	•					Reinforcement Adhesive; See-Cure Technology; fast room-temperature cure; reduces stress on board components; thixotropic for minimized movement after dispense	38,000	Blue Transparent Gel	D50	170	98 [14,000]	16 [2,300]	1.6
9483-Z	•	•				Conformal Coating; excellent thermal shock resistance; corrosion resistant; blue fluorescing; MIL-I-46058C, IPC-CC-830-B, UL 94V-0, UL 746E	750	Clear, Light Yellow	D60	19	480 [70,000]	10.3 [1,500]	2.0
9501-F	•	•				Structural Adhesive; blue fluorescing; Excellen adhesion to metals and plastics; Optimized for LED curing at 385 nm	10,000	Colorless Transparent	D65	142	545 [79,000]	17.2 [2,500]	0.6
7501-T-UR-SC-Z		•				Structural Adhesive; TPO free; Encompass® technology; visual cure confirmation; Ultra-Red® fluorescing; optimized for 405 nm cure; bonds to tin-plated brass	8,500	Blue Translucent, Colorless	D73	160	855 [124,000]	20 [2,900]	0.3
6-621	•		•		•	Structural Adhesive; forms hard, clear bonds to a variety of substrates including metal, glass, ceramic, and phenolic and filled plastics	800	Clear Translucent	D80	37	550 [80,500]	22 [3,200]	0.4
6-621-GEL-F	•		•		•	Structural Adhesive; forms hard, clear bonds to a variety of substrates; fluoresces blue	27,000	Light Yellow Translucent Gel	D80	35	611 [88,700]	25.7 [3,700]	0.2
9-911-REV-B	•		•			Wire-Tacking Adhesive; UV/Visible light curing with secondary heat cure; solvent resistant; blue fluorescing	25,000	Clear Translucent Gel	D80	30	552 [80,000]	24 [3,500]	0.7
9008	•					Encapsulant; moisture resistant; remains flexible to -40C; Ideal for COF applications	4,500	Light Yellow Transparent	D35	270	45 [6,500]	10 [1,500]	1.2

Featured Product **SC** See-Cure Technology **UR** Ultra-Red® Technology **Z** TPO Free

	Recommended Substrates																							
	ABS	CAP	Kapton	Lead Frame	PC	PCB	PC/ABS Blend	PCTG	PEI	PETG	PMMA	PS	PSU	PU	PVC	SAN	Silicon	TPU	AL	Ceramic	Cold Rolled Steel	FR-4	Glass	Stainless Steel
Control Systems																								
9-20558-REV-A					❍					❍					●									
9014			●																			●	●	
9037-F						●													❍			●		
9309-SC				●		●											●			●				
9422-SC				●		●											●			❍				
9483-Z	●			●		●														●		●		
9501-F	●	●			●		●	●		●		●			●	●			●			●	●	●
7501-T-UR-Z	●				●				●		●	●	●	●	●	●		●						●
6-621	●				❍				❍					❍	❍				●	●	●	●	●	●
6-621-GEL-F																								
9-911-REV-B				●		●											❍			❍				
9008			●																	●		●	●	

● Recommended ❍ Limited applications

EQUIPMENT OVERVIEW

Dymax offers a wide range of curing equipment including various spot lamps, flood lamps, and conveyor systems, as well as radiometers and other accessories. Since Dymax designs and manufactures its own lamp systems, the lamps are optimized to work with the adhesives to gain process efficiencies by targeting rapid surface curing, depth of cure, and speed of cure, all while delivering light in a rapid and economical way. CE marked equipment is available.

Dispensing Systems

Our Application Engineering lab can assist manufacturers with integrating the appropriate manual and robotic dispensing systems into their production lines.

Spot Lamps

Spot lamps provide a wide variety of methods to deliver light to a very precise location. They can be used manually by an operator or incorporated into a high-speed automated assembly line. Dymax offers multi-spectrum light-emitting lamps which use high-pressure mercury vapor bulbs, as well as light-emitting diode spot lamps, which use an array of surface-mounted LEDs instead of traditional metal halide or mercury bulbs.

Radiometers

Measurement of the lamp intensity and dosage is critical to the successful implementation of light-curing technology. Dymax radiometers allow operators to monitor and document a light-curing process.

Flood Lamps

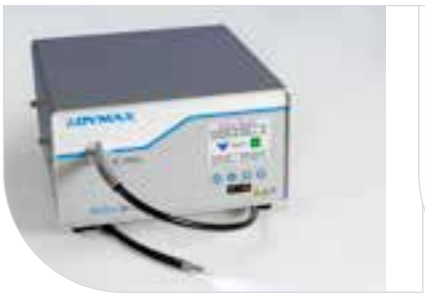
Static flood lamp systems are suited for area curing or for curing multiple assemblies. They use moderate- to high-intensity, multi-spectrum UV/Visible light for fast curing. Light-curing flood lamps can be easily integrated into existing manufacturing processes by mounting the lamps above high-speed assembly lines to achieve rapid cures. Shutter assemblies, mounting stands, and shields are available to create a custom curing system.

Conveyor Systems

Conveyor systems consist of a moving belt that passes through a curing tunnel with multi-spectrum lamps mounted from above or on each side for fast curing of parts. These conveyor systems are designed to offer consistent, fast, and safe curing. They can be outfitted with standard metal halide (longwave UV), mercury (shortwave UV), or visible bulbs. Consistent line speed, lamp height, and intensity provide a consistent light-curing process for high throughput.

CURING SYSTEMS

Spot Curing System System



BlueWave® 200 Version 3.1
UV Light-Curing Spot Lamp

BlueWave® QX4® V2.0 LED Spot-Curing System

BlueWave® MX-150™ LED Spot-Curing System

	BlueWave® 200 V3.1 UV Light-Curing Spot Lamp	BlueWave® QX4® V2.0 LED Spot-Curing System			BlueWave® MX-150 LED Spot-Curing System		
		RediCure® 365 nm	PrimeCure® 385 nm	VisiCure® 405 nm	RediCure® 365 nm	PrimeCure® 385 nm	VisiCure® 405 nm
Power Requirements	100-240 VAC, 50-60Hz, 2.5 Amps	100-240V~ 2A, 50-60Hz			100-240V~ 2A, 50-60Hz		
Intensity Output	>17 W/cm² initial intensity	16.9 W/cm²	32.9 W/cm²	22.0 W/cm²	24 W/cm²	38 W/cm²	36 W/cm²
Intensity Adjustment	1% - 100%	10% to 100%			10% to 100%		
Bulb Ignition Warranted	2,000 hr (200 Watt mercury bulb)	20,000 hr (LED Chip)			20,000 hr (LED Chip)		
LED Timer	0.1 to 9,999 seconds	0.1 to 999 seconds			0.1 to 999 seconds		
LED Activation	Foot pedal , front panel, or PLC	Foot pedal, LCD touch screen, or PLC			Foot pedal, LCD touch screen, or PLC		
Dimensions (W x D x H, cm)	31.8 x 30.5 x 16.5	Controller: 9.0 x 14.1 x 13.7			Controller: 14.6 x 9.5 x 15.9 Emitter: 20.06 x 5 x 5		
Part Number							
Unit	41014 (Type G Plug)	88823 (Controller only, Type G Plug)			42379 (1-Channel Controller Only, Type G Plug) 43186 (2-Channel Controller Only, Type G Plug) 43183 (4-Channel Controller Only, Type G Plug)		
LED Head / LED Emitter	N/A	88807	88808	88809	42336	42337	42338
					5-mm lightguide simulator comes with every emitter		
Lens Only		81205: 3-mm 81206: 5-mm 81207: 8-mm			N/A		
Accessories & Spare Parts		84103 AC Power Adapter 84123 North American Power Cord 84121 UK Power Cord 84104 China Power Cord 84125 1.0 M Extension 84127 2.0 M Extension 88821 Mounting Clamp Kit 88822 Connection Clamp 81208 Mounting Clamp Extension Kit			36987 5-mm Lightguide Simulator 41148 Adjustable Taper Shoulder Focusing Lens (5 mm) 43299 Machine Interface Module Only BlueWave M-MIM 43453 Interconnect Cable Assembly (12") 42287 Interconnect Cable Assembly (2M) 42889 Interconnect Cable Assembly (5M) 43010 Interconnect Cable Assembly (10M) 43011 Interconnect Cable Assembly (20M)		

Lightguides

Lightguides transmit UV and visible energy from a source mounted inside of a spot-curing unit to the curing area. When choosing a lightguide for your system, the following factors should be considered:

Length – Lightguides are commonly one meter long although other lengths are available.

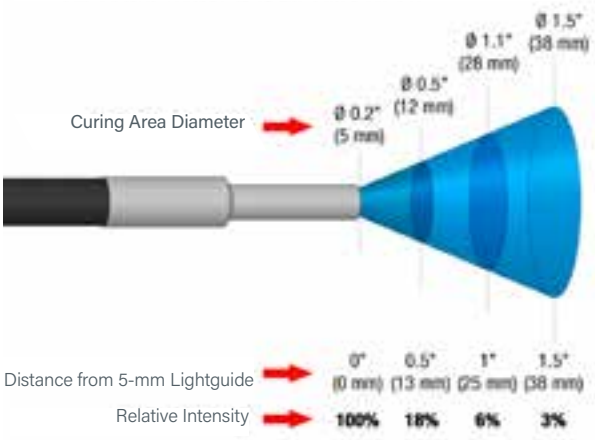
Diameter – Single-pole lightguides are available with 3-mm, 5-mm, or 8-mm inside diameters. Although the 5-mm lightguide will register a higher intensity, the 8-mm lightguide provides more curing power (intensity x area) because a larger lightguide opening captures more of the light emitted from the bulb. Each pole of a multi-pole lightguide has an inside diameter of 3 mm.

Multiple Poles – Light emitting from a spot lamp can be channeled through a single lightguide (single pole) or split between multiple lightguides (multiple poles). Each pole of a multi-pole lightguide emits equal intensity (typically ±10% for liquid-filled lightguides) and all share a common shutter. Both liquid-filled and quartz-fiber multi-pole lightguides are available from Dymax.

Connection – There are basically two types of connectors used in the spot lamp industry, "Wolf" and "D" connectors. Dymax provides lightguides with both connector types, although "D" connectors are an industry standard and compatible with current Dymax lamp designs (older Dymax designs utilized "Wolf" connectors).

Curing Area/Intensity vs. Distance – The UV and visible light emitted from a lightguide diverges. As a result, intensity decreases and curing area increases with distance from the end of the light guide. The chart to the right describes this relationship clearly for the 5-mm liquid lightguide.

Curing Area/Intensity vs. Distance Using a 5-mm Lightguide



Part Number	Lightguide Description (all noted are liquid filled; quartz fiber are also available)		Compatible Dymax Systems
5720	Single Pole	5 mm x 1 M	BlueWave® 75 BlueWave® 200 BlueWave® LED Prime UVA BlueWave® LED VisiCure® BlueWave® DX-1000 BlueWave® DX-1000 VisiCure®
5721	Single Pole	5 mm x 1.5 M	
5722	Single Pole	8 mm x 1 M	
38476	Two Pole	3 mm x 1 M	
38477	Three Pole	3 mm x 1 M	
38478*	Four Pole - Fiber Optic	3 mm x 1 M	Compatible with All BlueWave® Spot Lamps
36619	Single Pole - Wolf Style	3 mm x 1 M	BlueWave® MX-150
37043	Two Pole - Wolf Style	3 mm x 1 M	
35101	Single Pole - Wolf Style	5 mm x 0.5 M	
35102	Single Pole - Wolf Style	5 mm x 1 M	
36238	Single Pole - Wolf Style	5 mm x 1.5 M	
38998	Single Pole - Wolf Style	5 mm x 2 M	
38676*	Four Pole - Extended Range	3 mm x 1.5 M	
38851*	Four Pole	3 mm x 1.5 M	
39791*	Four Pole - Fiber Optic	3 mm x 1 M	

* Lightguide adapter conversion kit (PN 42932) required for use with BlueWave® MX-150.

Spot-Curing Systems Accessories

Lightguide Mounting Stands

39700 Single Lightguide Mounting Stand
Utilizes a 24" flexible arm for mounting 3, 5, and 8-mm lightguides. This stand offers a 5" x 5" (127 mm x 127 mm) working area and allows repeatable, hands-free spot curing.

41325 Acrylic Lightguide Mounting Stand
Multiple lightguides can be securely mounted on this stand for repeatable, hand-free spot curing.

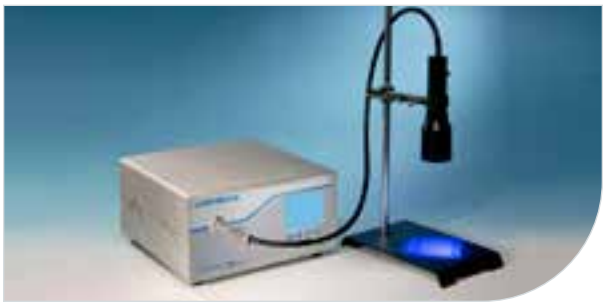
41595 Lightguide Stand Expansion Kit
Allows the Dymax acrylic lightguide mounting stand to hold up to four lightguide poles.

Single Lightguide Mounting Stand

Rod Lenses

Turn a spot into a flood lamp with shutter! A rod lens re-focuses the UV light emitted from a spot lamp to create a very uniform (<5% variation) 2" x 2" (50.8 mm x 50.8 mm) or 5" x 5" (127 mm x 127 mm) curing area. These rod lenses attach to the UV light-curing spot system using an 8-mm lightguide (sold separately).

38699 Rod Lens, 2" x 2" (50.8 x 50.8 mm) Area
38698 Rod Lens, 5" x 5" (127 x 127 mm) Area



BlueWave® 200 with Rod Lens

Lightguide Terminators

Lightguide terminators can be attached to the end of a lightguide to help users get UV light to those difficult-to-reach locations.

39029 3 mm/60°
39030 3 mm/90°
38042 5 mm/60°
38049 5 mm/90°
39334 8 mm/60°
39333 8 mm/90°

Lightguide Simulators

A lightguide simulator can be used to accurately measure the direct light intensity from the system's energy source.

38408 Lightguide Simulator, 7-mm Diameter
36987 Lightguide Simulator, 5-mm Diameter

Emitter Stands & Shields

42390 BlueWave® MX-Series Mounting Stand
Mounting stand with adjustable height for a single MX-series emitter.

43019 BlueWave® MX-Series Single Emitter Mounting Kit
Mounting adapter for attaching MX-series emitters.

43070 BlueWave® MX-Series Multi-Array Mounting Stand
Accommodates up to 4 MX-series emitters.

42426 Emitter Holder Assembly Bracket
Securely mount an emitter to the side of the BlueWave® MX-150 controller for configurations using a lightguide.

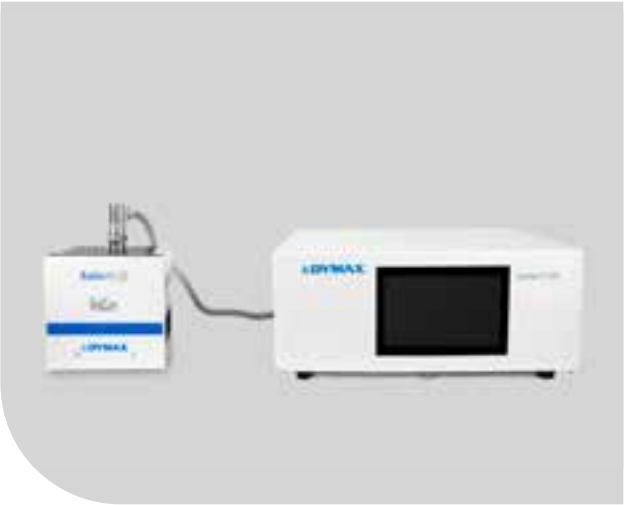
41395 Three-Sided Acrylic Shield
Compatible with the BlueWave® MX-150. A simple and cost effective three-sided shield that is removed manually.

Flood Curing System

BlueWave® FX-1250

The BlueWave® FX-1250 is a high intensity flood-curing system that delivers true, high-irradiance LED light for better speed, depth, and fullness of cure. The system provides the best cure by combining intensities of over 2 W/cm² with a 5" x 5" (12.7 cm x 12.7 cm) curing area and high uniformity.

The BlueWave® FX-1250 is comprised of a controller and up to two LED emitters. The controller features a 7" touch screen with an intuitive, easy to use interface. It can be activated, controlled, and remotely monitored by PLC, and also store programs and parameters for repeatable processes. The controller also continuously monitors the health of the system. LED emitters are available in three wavelengths for greater curing flexibility.



- Large curing area, 5" x 5" (12.7 cm x 12.7 cm)
- Excellent uniformity and higher intensity
- LED emitters available in 365, 385, and 405 nm wavelengths
- 7" Touch screen interface
- 1 & 2 channel controller options
- PLC activation and control
- Greener technology - no ozone generation, mercury free, & lower energy consumption than conventional lamps
- Fully programmable with capability to store up to 16 programs
- Unit can be used as a bench-top cure system or incorporated into an automated process or conveyor

	RediCure® 365 nm	PrimeCure® 385 nm	VisiCure® 405 nm
Typical Intensity Output, mW/cm²*	1,700	2,100	2,000
Dimensions (W X H X L)	Emitter: 6.7" x 5.3" x 6.4" (170 mm x 134 mm x 162 mm) 1CH Controller: 4.5" x 13" x 18.25" (11.4 cm x 33.0 mm x 46.4 cm) 2CH Controller: 16.5" x 13.8" x 5.8" (420 mm x 350 mm x 165 mm)		
Curing Area	5" x 5" (12.7 cm x 12.7 cm)		
Power Requirements	100-240 V≈ 10 Amps, 50-60 Hz		

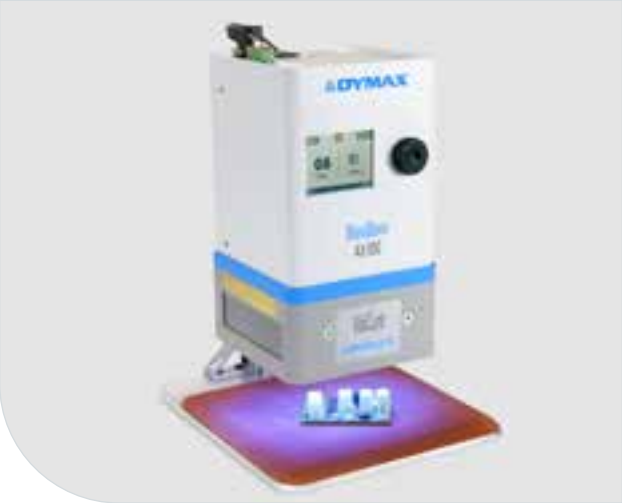
* When measured at 25-mm distance with an ACCU-CAL™ 50-LED radiometer in flood mode.

The BlueWave® FX-1250 is sold as a complete system or as separate components. Other accessories can be added for specific applications. See page 75 for additional accessories.

	RediCure® (365 nm)	PrimeCure® (385 nm)	VisiCure® (405 nm)
LED Emitter	88801	88802	88803
BlueWave® FX-1250 1-Channel Controller Only	88850 Unit with No Power Cord* 88805 Asian Version (Type G Plug) 88846 North American Version		
BlueWave® FX-1250 2-Channel Controller Only	88851 Unit with No Power Cord* 88804 Asian Version (Type G Plug) 88847 North American Version		
Complete System (1CH Controller, Interconnect Cable, 1X Emitter, Foot Switch, Power Cord)	88856 Unit with No Power Cord* 88859 Asian Version (Type G Plug) 88848 North American Version	88857 Unit with No Power Cord* 88860 Asian Version (Type G Plug) 88849 North American Version	88858 Unit with No Power Cord* 88861 Asian Version (Type G Plug) 88855 North American Version
Interconnect Cables	84025 Type L & L 84026 Type I & L		

*The appropriate power cord is included for orders in Europe.

BlueWave® AX-550 V2.0



The BlueWave® AX-550 combines a controller, emitter, and power supply into a compact, all-in-one LED flood-curing system. Eliminating the need for a large, traditional–style controller and bulky cables, this unit has a greatly reduced footprint and is easily integrated into automated processes.

The system features a large 5" x 5" (12.5 x 12.5 cm) curing area, which is controlled by an easy-to-navigate user interface with push-button controls or through a PLC interface. Dymax offers the system with three different wavelength emitters (365, 385, and 405 nm), which are field-upgradable by customers so they can switch to another wavelength easily if needed.

	RediCure® 365 nm	PrimeCure® 385 nm	VisiCure® 405 nm
Typical Intensity Output, mW/cm²*	650	800	800
Dimensions (H X W X D)	6.54" x 11.41" x 6.75" (16.6 cm x 29.0 cm x 17.1 cm)		
Curing Area	5" x 5" (12.5 cm - 12.5 cm)		
Power Requirements	100 – 240 VAC 50/60 Hz (Auto-Ranging)		
Asian Version (Type G Plug)	60876	60879	60882

* When measured at 25-mm distance with an ACCU-CAL™ 50-LED radiometer in flood mode.

BlueWave® MX-275

The BlueWave® MX-275 curing system is a high-intensity UV LED flood-curing system. Light energy is delivered in a line pattern instead of traditional patterns. A single BlueWave® MX-275 emitter provides a 5 mm x 50 mm curing area, but when paired with a multichannel controller, up to four emitters can be used to produce a curing area as large as 5 mm x 200 mm in line patterns.

	RediCure® 365 nm	PrimeCure® 385 nm	VisiCure® 405 nm
Typical Intensity, mW/cm²*	1,460	1,870	1,750
Curing Area	1.97" x 1.97" (5 mm x 50 mm)		
Power Requirements	100 – 240 VAC ≈ 2.5 A, 50-60Hz		
Line Pattern LED Emitters	43094	43098	43102
BlueWave® MX-Series	43186 2-Channel Controller Only 43183 4-Channel Controller Only		
BlueWave® MX-MIM	43299 Machine Interface Module Only		
Interconnect Cables	42287 Interconnect Cable Assembly (2M) 42889 Interconnect Cable Assembly (5M) 43010 Interconnect Cable Assembly (10M) 43011 Interconnect Cable Assembly (20M)		

* Measured at a working distance of 10 mm using a Dymax ACCU-CAL™ 50-LED Radiometer with 3-mm aperture set to corresponding light measurement mode. This is preliminary intensity data for reference, tests using flood mode without an aperture will yield different results.

BlueWave® MX-250

The BlueWave® MX-250 is comprised of two main parts, a controller with an easy-to-use touchscreen interface and a uniquely designed, high-intensity LED emitter. Curing energy is created using a micro-processor-controlled LED chip set in the emitter. The emitter provides a curing area of 50 mm x 50 mm but multiple systems can be grouped together to create larger curing pattern matrixes as needed.

This system's design allows it to be truly tailored to users' curing needs – allowing them to choose from three different wavelength LED emitters (365, 385, or 405 nm) and providing additional flexibility with the size and pattern of the active curing area. Users also have endless set up flexibility, as this system can be set up as a bench-top unit, or for automated curing processes, the emitter can be easily mounted to robotic arms or further from the controller without fear of intensity.

	RediCure® 365 nm	PrimeCure® 385 nm	VisiCure® 405 nm
Typical Intensity Output, mW/cm²*	255	355	375
Curing Area	1.97" x 1.97" (50 mm x 50 mm)		
Power Requirements	100 – 240 VAC ≈ 2.5 A, 50-60Hz		

* Measured at 25-mm distance with an ACCU-CAL™ 50-LED radiometer.

- 1.97" x 1.97" (50 mm) curing area with the option for multiple systems to be grouped together to create larger curing patterns
- Touchscreen interface for easier operation
- Emitter design for set up flexibility and consistent intensity
- Admin and production modes with the ability to save curing programs for repeated use
- Instant on/off for a more energy efficient unit with no warmup period
- PLC interface that is easily incorporated into automated systems

A complete BlueWave® MX-250 system features a controller and an LED emitter. Components are sold separately. Other acces-sories can be added for specific applications. See page 75 for additional accessories.

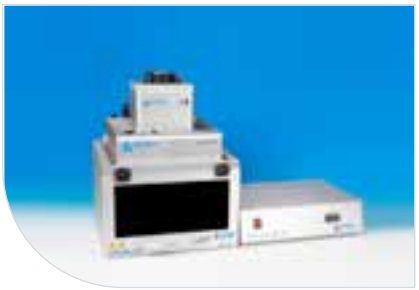
	RediCure® 365 nm	PrimeCure® 385 nm	VisiCure® 405 nm
LED Emitter	42806	42807	42808
BlueWave® MX-Series 2-Channel Controller Only	43184 Unit with No Power Cord** 43186 Asian Version (Type G Plug) 43185 North American Version (115V Standard Plug)		
BlueWave® MX-Series 4-Channel Controller Only	43181 Unit with No Power Cord** 43183 Asian Version (Type G Plug) 43182 North American Version (115V Standard Plug)		
BlueWave® MX-MIM	43299 Machine Interface Module Only		
Interconnect Cables	43453 Interconnect Cable Assembly (12 inches) 42287 Interconnect Cable Assembly (2 meter) 42889 Interconnect Cable Assembly (5 meter) 43010 Interconnect Cable Assembly (10 meter) 43011 Interconnect Cable Assembly (20 meter)		

** The appropriate power cord is included for orders in Europe.

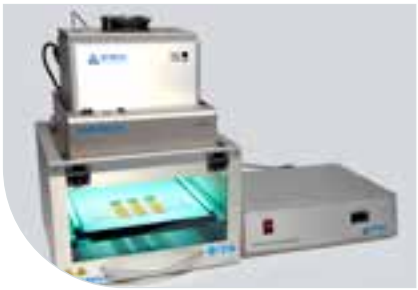
EC Series and ECE Series Flood Lamp Systems

Dymax UV light-curing flood-lamp systems are ideal for light curing large parts or curing many small parts simultaneously. With intensities ranging from 105-225 mW/cm2, Dymax flood lamps are capable of curing most UV light-curable adhesives, sealants, and coatings, tack free in 30 seconds or less. These flood lamps can be incorporated into automated assembly systems or mounted onto conveyors. Dymax flood units can also be used as turnkey bench-top units (with optional shutters).

- Large curing area, 5" x 5" (12.7 cm) or 8" x 8" (20.3 cm)
- Adjustable lamp height
- 100% shielding with safety interlock kit
- Two bulb options: shortwave or longwave
- Extended exposure time settings to 9,999.9 seconds
- Controlled power-up sequence ensures proper temperature



5000-EC with ZIP™ Shutter & Light Shield



ECE 2000 with ZIP™ Shutter & Light Shield

Modular ECE 5000

	2000-EC	5000-EC	ECE 2000	ECE 5000
Typical Intensity Output	105 mW/cm^2	225 mW/cm^2	105 mW/cm^2	225 mW/cm^2
Curing Area (cm)	20.3 x 20.3	12.7 x 12.7	20.3 x 20.3	12.7 x 12.7
Working Distance (cm)	5.08 - 15.24	5.08 - 15.24	5.08 - 15.24	5.08 - 15.24
Typical Degradation	<20% over 2,000 hr	<20% over 2,000 hr	<20% over 2,000 hr	<20% over 2,000 hr
Power Requirements	90-264 V, 47-63 Hz	90-264 V, 47-63 Hz	100-240 V, 50-60 Hz	100-240 V, 50-60 Hz
Dimensions of Reflector and Power Supply (W x D X H, cm)	26.7 x 22.9 x 19.1, 40.6 x 30.5 x 10.8	17.2 x 17.2 x 20.3, 40.6 x 30.5 x 10.8	26.7 x 22.9 x 19.1, 40.6 x 30.5 x 10.8	17.2 x 17.2 x 20.3, 40.6 x 30.5 x 10.8
System Options with Part Numbers				
Modular (No Shielding or Shutter)	38105	38100	40995	40935
With Mounting Stand	39370	39380	41180	41140
With Light Shield	39720	39820	41200	41160
With Light Shield & Manual Shutter	39723	39823	40860	41100
With Light Shield & ZIP™ Shutter	39721	39821	41060	41050

Flood Curing System Accessories

Dymax light-curing flood lamps can be outfitted with the shutters and shielding shown below. Additional shutters, enclosures, and accessories may be available.

Mounting Stands

41268 Standard Mounting Stand
A simple and cost effective mounting stand with adjustable height. Includes an acrylic back shield.

BlueWave® AX-550

43410 BlueWave® AX-550 Mounting Stand
Stand with acrylic back-shield. Includes mounting carriage PN 60036.

60036 BlueWave® AX-550 Mounting Carriage
Mounting carriage to mount the BlueWave® AX-550 on stand PN 41268.

BlueWave® AX-550 Mounting Stand

BlueWave® MX-Series

42909 Single Emitter Mounting Kit
Mounting adapter for attaching MX-series emitters.

42390 Single Emitter Mounting Stand
Mounting stand with adjustable height for a single MX emitter.

Single Emitter Mounting Stand (Left)
Multi-Emitter Mounting Stand with Acrylic Back Shied (Right)

43019 Multiple Emitter Mounting Kit
Works with stand PN 41268.

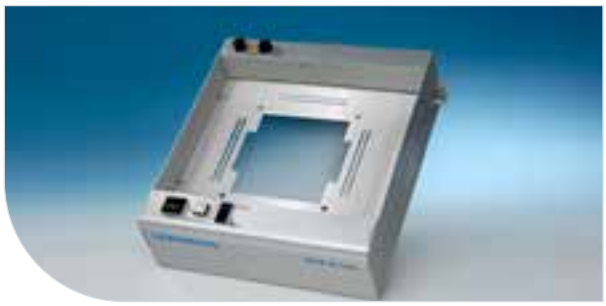
43070 Multi-Emitter Stand with Acrylic Back Shield
Mounting stand with acrylic back shield for multiple MX emitters. Works with stand PN 41395.

Shutters

37863 ZIP™ Shutter (EC Floods)
Timed and manual modes. Foot pedal or PLC controlled.

40885 ZIP™ Shutter (ECE Floods)
Timed and manual modes. Foot pedal or PLC controlled.

35572 Manual Shutter (EC & ECE Floods)
Most cost-effective shutter system.



ZIP™ Shutter (ECE Floods)

Shielding

41175 EC Flood Light Shield
360° shielding with lifting door and sliding curing shelf. Compatible with Dymax shutters.

40785 ECE Flood Light Shield
360° shielding with lifting door and sliding curing shelf. Safety Interlock feature included. Compatible with Dymax shutters.

41321 BlueWave® LED Flood Light Shield
360° shielding with a swing-up door and slide-out shelf. Not compatible with Dymax shutters.

41395 3-Sided Acrylic Shield
A simple and cost effective 3-sided shield that is removed manually. Compatible with the BlueWave® LED Flood and BlueWave® MX-250 systems.

ECE Flood Light Shield

Conveyors

UVCS 2.0 Conveyors

The standard Dymax conveyor platform, the UVCS series, has a belt width of 12" (304.8 mm) and can be outfitted with a number of different UV light-curing systems. Belt speed is accurately measured using an optical encoder and displayed on a digital LCD. The UVCS series conveyors are completely shielded from UV light for user protection. The standard UVCS 2.0 conveyor is most commonly outfitted with Dymax 5000-EC or Fusion® F300S curing lamps.

- Multiple flood or focused-beam configurations available
- Up to 10" clearance available (with optional risers)
- Accurate belt speed (using an optical encoder)

	One 5000-EC (CM)*		Two 5000-ECs (CM)*		Two 5000-ECs (FW)**		Four 5000-ECs (FW)**		One Fusion F300S (CM)*	Two Fusion F300S (FW)**
Asian Version (Type G Plug)	-		-		-		-		42006	42007
Conveyor Voltage	120V	220/230V	120V	220/230V	120V	220/230V	120V	220/230V	220/230V	
Amperage (With Lamps)	4.8A	2.4A	4.8A	2.4A	4.8A	2.4A	4.8A	2.4A	2.4A	
Belt Width	12" (30 cm)									
Belt Speed	1-27 feet per minute									
Cure Width	6" (15 cm)				12" (30 cm)				6" (15 cm)	12" (30 cm)
Lamp Adjustment Range	1.7" to 5.5" (4.3 cm to 14 cm)									
Max. Parts Height	4.25" (10.8 cm) | Adding risers increases to 10" (25.4 cm)									
Overall Dimensions (L x W x H) (Not Including Lamps)	50.5" x 29.8" x 16.4" (128 cm x 76 cm x 42 cm)									
Shipping Weight (With Crates & Lamps)	350-400 lbs. (159-181 kg)									
Crated Dimensions (L x W x H)	69" x 44" x 29" (175 cm x 112 cm x 74 cm)									

* CW (Center Mounted) - These conveyors have center-mounted lamps and are supplied with removable guides to channel parts into the middle 6" of conveyor.

** FW (Full Width) - These conveyors have lamps that span the full width of the conveyor.

UVCS LED Conveyors with BlueWave® AX-550 V2.0 Flood

Dymax UVCS bench-top conveyor systems are designed for fast curing of adhesives, coatings, and inks that react in the UVA and/or visible spectral ranges. The conveyors can be outfitted with one of three different wavelength BlueWave® AX-550 LED flood lamps (365 nm, 385 nm, or 405 nm) and can accommodate up to four emitters. If two emitters are used, they can be mounted side-by-side or front-to-back for additional process flexibility.

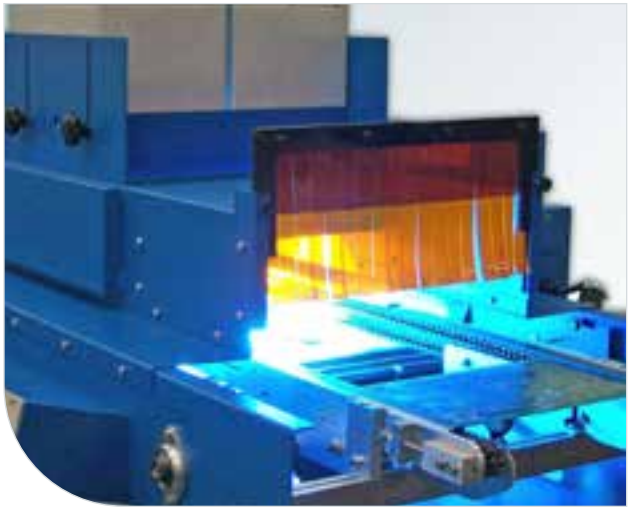
All UVCS conveyors have adjustable belt speeds of 1 to 32 fpm, as well as adjustable lamp-to-belt distance to address a variety of application requirements. When combined, the UVCS conveyors' consistent intensity, fast curing, and adjustable line speeds create an optimized LED light-curing process that enables high throughput.

- 365, 385, or 405 nm emitters available
- Complete shielding from light
- Counterbalanced height adjustment mechanisms for ease of emitter-to-belt distance adjustments
- 1.5" minimum height with 4", 6", or 10" vertical clearance available

	1 Emitter		2 Emitters				4 Emitters**	
Base Conveyor	43555	43559	43556 FW	43557 FW	43557 CM	43561 CM	43558	43562
Conveyor Voltage (VAC)	120V	220V	120V	120V	220V	220V	120V	220V
Emitter	43248 RediCure® 43249 PrimeCure® 43250 VisiCure®		43549 RediCure® (Order Qty 2) 43550 PrimeCure® (Order Qty 2) 43551 VisiCure® (Order Qty 2)				43549 RediCure® (Order Qty 4) 43550 PrimeCure® (Order Qty 4) 43551 VisiCure® (Order Qty 4)	
Controller	43331		43331 (Order Qty 2)				43331 (Order Qty 4)	
Cure Width*	5" (13 cm)		10" (25 cm)		5" (13 cm)		10" (25 cm)	
Belt Width	12" (30 cm)							
Belt Speed	0.8 – 32.0 ft/min (0.3 – 9.7 m/min)							
Lamp Adjustment Range	1.5" - 4.5" (75 mm - 114 mm)							
Max. Parts Height	4.5" (10.8 cm)							
Overall Dimensions (L x W x H) (Not Including Lamps)	50.5" x 29.8" x 16.4" (128 cm x 76 cm x 72 cm)							

* CW (Center Mounted), FW (Full Width)

Edge-Carry Conveyors



Dymax Edge-Carry conveyors are designed for efficient curing of UV and/or visible light-sensitive adhesives, inks, and coatings. These conveyors can be outfitted with a variety of lamp configurations to address a variety of application specific requirements. They offer complete shielding from UV light and consistent cure times. Configuration options allow flexibility when defining intensity requirements to keep operating costs to a minimum. Standard height clearance is 0.75" across the entire 18" width, which is ideal for low profile parts such as PCBs, and up to 6 inches across a 13.75" width, which can be increased to either 8" or 12" with optional risers installed.

- Multiple flood or focused-beam configurations available
- Chain rail width is easily adjusted to accommodate parts widths up to 12"
- Adjustable lamp-to-part distance

	5000-EC								2000/1200-EC		Fusion F300	
	1 Lamp, CM*		2 Lamps, CM*		2 Lamps, FW*		4 Lamps, FW*		1 Lamp, CM*		1 Lamp, CM*	2 Lamps, FW*
Part Number	40324	40328	40325	40329	40326	40275	40327	40331	40334 40335	40332 40333	40336	40280
Conveyor Voltage	120V	230V	120V	230V	120V	230V	120V	230V	115 or 208-240V		208-240V	
Amperage (With Lamps)	9.6A	4.8A	17.6A	8.8A	17.6A	8.8A	33.6A	16.8A	TBD	TBD	16A	32.6A
Max. Chain Spacing	18" (45.7 cm)											
Conveyor Speed	1-32 feet per minute											
Cure Width	6" (15 cm)				12" (30 cm)				9" (23 cm)		6" (15 cm)	12" (30 cm)
Lamp Adjustment Range	3.5" - 7.3" (8.9 cm - 18.5 cm)											
Max. Parts Height	6.25" (15.86 cm)											
Overall Dimensions (L x W x H) (Not Including Lamps)	59" x 35" x 39.5" (150 cm x 89 cm x 100 cm)											
Shipping Weight (With Crates & Lamps)	390 lbs. (177 kg)		410 lbs. (186 kg)				450 lbs. (204 kg)		390 lbs. (177 kg)		475 lbs. (215 kg)	580 lbs. (263 kg)

* CW (Center Mounted) - These conveyors have center-mounted lamps and are supplied with removable guides to channel parts into the middle 6" of conveyor.

FW (Full Width) - These conveyors have lamps that span the full width of the conveyor.

UVCS SideCure Conveyor

The UVCS SideCure conveyor system is designed for the UV curing of adhesives and coatings from the sides and/or top. The SideCure conveyor can be outfitted with up to eight 5000-EC UV curing flood lamps that offer complete shielding from UV light and consistent exposure times. The conveyor's 12" wide belt and 5" high side-curing capability makes the SideCure a very versatile UV curing solution. The SideCure conveyor is ideal for masking, medical, and electronic applications where 180° UV curing is required.

- Left, right, and top curing capability
- Adjustable top lamp height and side lamp position
- Accurate digital belt control and readout
- Controlled and consistent cure times
- Accepts parts up to 36" x 12" x 7" (L x W x H)

UVCS SideCure with up to FOUR Side Lamps (lamps sold separately)		
Lamps (SideCure 5000-ECs PN 39798)	Up to eight	
Part Number	39767	39766
Conveyor Voltage	115V	220/230V
Amperage (With Lamps)	1.6A	0.9A
Belt Width	12" (30 cm)	
Belt Speed	1-27.5 feet per minute	
Cure Width	6" (15 cm) or 12" (30 cm) depending upon number and orientation of lamps	
Lamp Adjustment Range	Top Lamps: From 6.25" to 9" off the belt (16 cm to 23 cm) Side Lamps: From 3.5" to 6" off center (9 cm to 15 cm)	
Max. Parts Height	7" (17.8 cm)	
Overall Dimensions (L x W x H) (Not Including Lamps)	51" x 30" x 21.5" (130 cm x 76 cm x 55 cm)	
Shipping Weight (With Crates & Lamps)	450-500 lbs. (204-227 kg)	
Crated Dimensions (L x W x H)	72" x 52" x 31" (183 cm x 132 cm x 79 cm)	

RADIOMETERS

Radiometers measure the intensity of energy at specific wavelengths. UV light is, by definition, not visible to the human eye, so a radiometer is required to determine the amount of UV energy. The ability to measure light intensity is useful for three reasons:

- Maintaining a light-curing process – A radiometer can measure whether a light-curing system is providing intensity above the "bulb change" intensity. A radiometer is to a light-curing process what a thermometer is to a heat-curing process.
- Providing a worker-friendly light-curing process – A radiometer is required to determine if any UV light is reaching operators or bystanders.
- Measuring transmission rates through substrates – A radiometer can be used to measure the transmission rates of various wavelengths through substrates that absorb UV and/or visible light. To assure an effective curing process it is critical to measure the light intensity reaching the light-curable material below the intervening substrate.

	ACCU-CAL™ 50	ACCU-CAL™ 50V	ACCU-CAL™ 50-LED	ACCU-CAL™ 160
Wavelength Range	320 - 395 nm	400 - 470 nm	350 - 450 nm	328 - 382 nm (UVA model) 350 - 460 nm (LED model)
Intensities Range	1.0 mW/cm² - 40 W/cm²	1.0 mW/cm² - 40 W/cm²	1.0 mW/cm² - 40 W/cm²	1.0 mW/cm² - 40 W/cm²
Battery Life	250 hr	250 hr	250 hr	10 hr (backlight on, no operation) or 6 hr (backlight on, full operation)
Part Number	39561 ACCU-CAL™ 50 for flood lamps and conveyors 39560 ACCU-CAL™ 50 for flood lamps, conveyors and spots, with lightguide adapter (3mm, 5mm and 8nn) and lightguide simulator	40044 ACCU-CAL™ 50V for flood lamps and conveyors 40043 ACCU-CAL™ 50V for flood lamps, conveyors and spots, with lightguide adapter (3mm, 5mm and 8nn) and lightguide simulator	40505 ACCU-CAL™ 50-LED for spot and flood units 40519 ACCU-CAL™ 50-LED for LED floods and conveyors 39554 Flood-to-spot Adapter Kit 42218 BlueWave® QX4® Optic Adapter Upgrade Kit 43383 Line Optic Adapter Upgrade Kit for the BlueWave® QX4® and BlueWave® MX-275	41590 ACCU-CAL™ 160 UVA 41585 ACCU-CAL™ 160 LED

DISPENSING EQUIPMENT

	Model Number	Micro-Dot™	Stepper™	SD-200	eco-PEN	200	300	400	455	Dispense Pen for HLC® Adhesives
	DYMAX									
Dispense Data	Dispense Modes	Shot	Shot	Shot (timed), Continuous bead)	Volumetric	Shot (timed), Continuous (bead)			Shot (timed), Continuous (bead)	Shot (timed), Continuous (bead)
	Shot Sizes	0.0002 - 0.25 mL (15/18 GA Taper Tip)	0.01 - 0.10 mL 0.05 - 0.25 mL	-	.004 ml – continuous 0.50 – 6.00 ml/ min	-	-	0.002 mL to Continuous Flow	0.003 mL (0.066" tubing) to Continuous Flow	-
	Viscosity Range	Medium to High	Medium to High	Low to High	Low to High	Up to 5,000 cP			Medium to High	Low to High
	Materials*	UV Adhesives, Grease, Inks	UV Adhesives, Greases, Inks, Medical Fluids	UV Adhesives, Greases, Inks	UV Adhesives, Greases, Inks, Medical Fluids	UV Adhesives, Cyanoacrylates, Inks	UV Adhesives, Cyanoacry-lates, Inks	UV Adhesives, Inks	UV Adhesives, Cyanoacrylates, Inks	Hybrid Light-Curables
Mechanical Specs	Operation	Manual Syringe Dispenser	Manual Pipette	Powered Syringe Dispenser	Volumetric Pump	Diaphragm	Diaphragm	Needle	Disposable Fluid Path	Diaphragm
	Control	Manual Positive Displacement		Time Pressure	Programmable Positive Displacement	Manual Pressurized	Time Pressure	Time Pressure	Time Pressure	Manual Pressurized
	Disposable Fluid Path	Yes		Yes	No	No	No	No	Yes	Yes
	Controller	None		Integrated	EC200 2.0	None	DVC-345	DVC-345	DVC-345	None
	Operational Adjust-ments	Displacement		Time, Pressure, Suck-Back	Flow, Suck-Back	Flow	Flow	Flow	Over Pinch, Flow	Flow
Utilities	Electrical Required	None		100-240 VAC	110V	None	110V (for controller only) 100-240 VAC		110V (for controller only) 100-240 VAC	None
	Compressed Air Required	No		Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Supply Reservoirs	3, 5, 10 cc Syringe (most brands)	1, 3, 5 cc Syringe	3, 5, 10, 30, 55 cc Syringe	Any	Cartridge or Pressure Pot	Cartridge or Tank	Cartridge or Tank	Cartridge or Pressure Pot	Pressure Pot
Valve Materials	Valve Body (non-wet-ted)	N/A		N/A	Anodized AL	Acetal	Acetal	Acetal	Anodized AL	N/A
	Wetted Path	Syringe & Tip		Syringe & Tip	HD-POM / SS	Acetal	Acetal	SS/AL	Selected Tubing	Tube & Tip
	Wetted Valve Seals	N/A		N/A	High-molecular PE, VisChem	PTFE	PTFE	Silicone	N/A	N/A
	Tubing	N/A		N/A	N/A	Polyethylene	Polyethylene	Polyethylene	Polyethylene	Polyethylene
CE Approval		N/A	N/A	✓	✓	✓	✓	✓	✓	N/A

* If there is any question about material compatibility, please contact Dymax Application Engineering.
Valves containing disposable fluid path technology offer several choices of tubing to ensure proper compatibility with the fluid being dispensed.

Application Overview

Features	Micro-Dot™	Stepper™	SD-200	eco-PEN	200	300	400	455	HLC Dispense Pen
Viscosity Range**	Med-High	Med-High	Low-Med-High	Low-Med	Low-Med	Low-Med	Low-Med	Med-High	Low-High
Microdots	●	●	●	●			●		●
Dots	●	●	●	●	●	●	●	●	●
Beads			●	●	●	●	●	●	●
Potting			●	●	●	●	●	●	●
Spray - Conformal Coatings									
Spray - Maskants									

** Low Viscosity= < 1000 cP Medium Viscosity= 1000 cP - 10,000 cP High Viscosity= >10,000 cP+

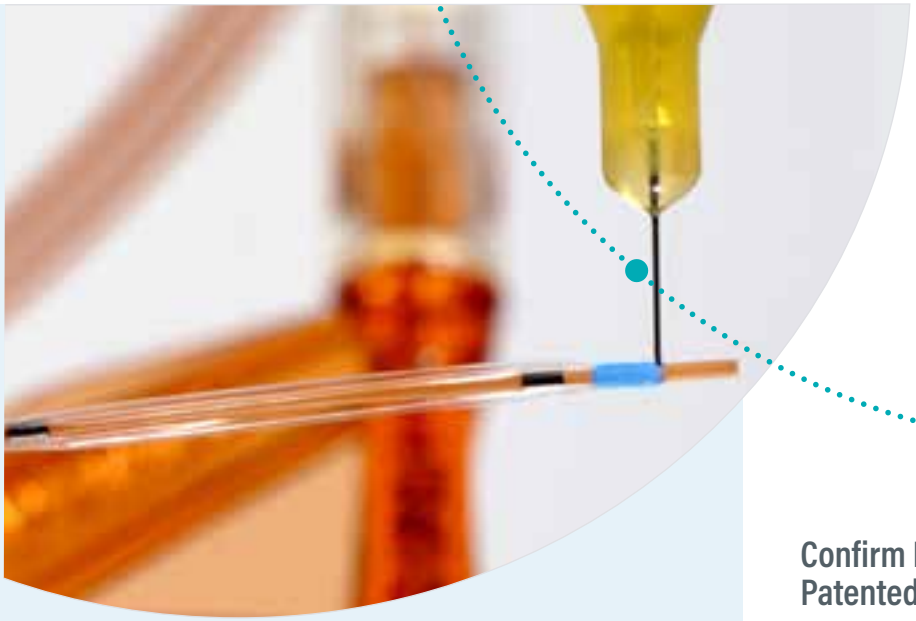
Model Number		826	830	475	485	775-Series	SG-150	SG-200	455 Spray	eco-SPRAY
DYMAX										
Dispense Data	Dispense Modes	Shot (timed), Continuous (bead)		Shot (timed), Continuous (bead)			Spray		Micro-Spray	Volumetric Micro-Spray
	Shot Sizes	0.005 mL	0.02 mL	0.004 mL to Continuous Flow	0.002 mL to Continuous Flow	0.01 mL to Continuous Flow	Flat: 0.75 - 2+" [1.91 - 5.08+ cm] Round: 0.25 - 2" [0.64 - 5.08 cm]	Round: 2 - 8" [5.08 - 20.32 cm]	Round: .05 ml – continuous	Round: .05 ml – continuous 0.50 – 6.00 ml/min
	Viscosity Range	Low to High (including stringy)	High (including stringy)	Low to Medium	Low to High	Medium to High (including stringy)	RS: <10,000 cP RH: >10,000 cP	High	Low to Medium (<5,000)	Low to High
	Materials*	UV Adhesives, Cyanoacrylates, Inks	UV Adhesives, Cyanoacrylates	UV Adhesives, Cyanoacrylates, Inks	UV Adhesives, Inks	UV Adhesives, Greases, Inks	Conformal Coatings, UV Maskants		UV Adhesives, Cyanoacrylates, Inks	UV Adhesives, Cyanoacrylates, Inks
Mechanical Specs	Operation	Disposable Fluid Path	Disposable Fluid Path	Diaphragm	Needle	Spool	Needle		Disposable Fluid Path	Spray, Dispense
	Control	Time Pressure	Time Pressure	Time Pressure			Fluid Pressure, Atomization Pressure		Time Pressure	Programmable Positive Displacement
	Disposable Fluid Path	Yes	Yes	No			No	No	Yes	No
	Controller	DVC-345	DVC-345	DVC-345			DVC-345		DVC-345	SC1200
	Operational Adjustments	Over Pinch, Flow, Suck-Back	Over Pinch, Flow, Suck-Back	Flow	Flow	Flow, Suck-Back	Flow		Over Pinch, Flow	Flow, Suck-Back
Utilities	Electrical Required	110V (for controller only) 100-240 VAC		110V (for controller only) 100-240 VAC			110 V (for controller only) 100-240 VAC		110V (for controller only) 100-240 VAC	110V
	Compressed Air Required	Yes	Yes	Yes			Yes		Yes	Yes
Supply Reservoirs		Cartridge or Pressure Pot	Cartridge or Pressure Pot	Syringe, Cartridge, or Tank			Cartridge or Tank		Cartridge or Pressure Pot	Any
Valve Materials	Valve Body (non-wetted)	Anodized AL	Anodized AL	SS, Anodized AL			SS		Anodized AL	Anodized AL
	Wetted Path	Tube & Tip	Selected Tubing	Acetal	Acetal/SS	SS/AL	SS		Selected Tubing	HD-POM/SS
	Wetted Valve Seals	N/A	N/A	UHMW PE	Silicone	PTFE or FKM	PTFE, KKFM		N/A	High-Molecular PE, VisChem
	Tubing	Polyethylene	Polyethylene	Polyethylene	Polyethylene	Polyethylene	Polyethylene	Polyethylene	Polyethylene	N/A
CE Approval		✓	✓	✓	✓	✓	✓	✓	✓	✓

* If there is any question about material compatibility, please contact Dymax Application Engineering.
Valves containing disposable fluid path technology offer several choices of tubing to ensure proper compatibility with the fluid being dispensed.

Application Overview

Features	826	830	475	485	775-Series	SG-150	SG-200	455 Spray	eco-SPRAY
Viscosity Range**	Low-Med-High	High	Low-Med	Low-Med-High	Med-High	RS: Low-Med RH: Med-High	High	Low-Med	Low-Med-High
Microdots	●			●					
Dots	●	●	●	●	●				●
Beads	●	●	●	●	●				●
Potting	●	●	●		●				●
Spray - Conformal Coatings						●	●	●	●
Spray - Maskants						●	●	●	●

** Low Viscosity= < 1000 cP Medium Viscosity= 1000 cP - 10,000 cP High Viscosity= >10,000 cP +



ADHESIVE INNOVATIONS

As an innovator in the adhesive and coating industries, Dymax strives to create new technologies and product lines that help manufacturers increase process efficiency, productivity, and throughput while decreasing costs and inventory. Through the years, our dedication to innovation has resulted in over 30 patents and numerous awards for our innovative technologies and service.

Our R&D experts are always striving to create new technologies that will help manufacturers improve their processes and minimize risk. Our current portfolio of technologies provide a variety of benefits including easier bond line inspection and cure confirmation for better quality control, faster cures for quicker processing, and curing in shadowed areas to eliminate concerns about uncured material.

Confirm Placement & Cure - Patented See-Cure Technology

Dymax adhesives with See-Cure technology feature built-in cure validation, allowing easy visual confirmation without specialized equipment. Initially bright blue for enhanced visibility during application, the adhesive turns colorless after curing under light, ensuring complete cure and enhancing manufacturing safety.

Speed up Production with Faster Cures - LED Light-Curing Technology

Dymax offers LED light-curable adhesives designed for optimal performance with its LED curing systems. With fast to ultra-fast cure speeds, these adhesives suit diverse assembly needs. Compatible curing equipment includes spot lamps, flood lamps, and conveyors for various process requirements.

Enhance Bond-Line Inspection - Fluorescing Technology

Adhesives formulated with Dymax Ultra-Red® are colorless until exposed to low-intensity UV light (360–380 nm). At that point they fluoresce bright red—ideal for use with plastics that naturally fluoresce blue. Unlike blue fluorescing products, Ultra-Red® doesn't absorb the same wavelengths as those used to cure the adhesive, enabling faster, deeper cures. This patented, exclusive compound produces a unique, traceable energy peak for product identification. Dymax also offers products that fluoresce blue under low-intensity "black" light (365 nm) for easy in-line inspection of bond lines.

Enhance Bond-Line Inspection & Confirm Cure - Encompass® Technology

Dymax adhesives formulated with Encompass® technology incorporate Dymax exclusive Ultra-Red fluorescing and See-Cure color-change technologies into one light-curable product. As a result, manufacturers gain efficiencies from rapid on-demand curing with easy cure confirmation and post-cure bond-line inspection.

Cure in Shadows - Multi-Cure® Light/Heat Cure Technology

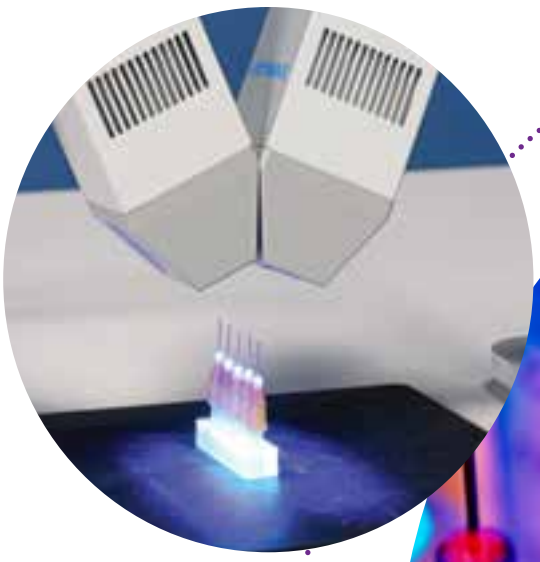
Multi-Cure adhesives and coatings combine the high-speed cure of UV or UV/Visible light with secondary cure mechanisms that enhance polymerization. Secondary cure mechanisms, which include moisture, thermal, or activator cure, are useful when light can only reach a portion of the bond line, or when tacking a part prior to final cure to allow easier handling and transport during the manufacturing process.

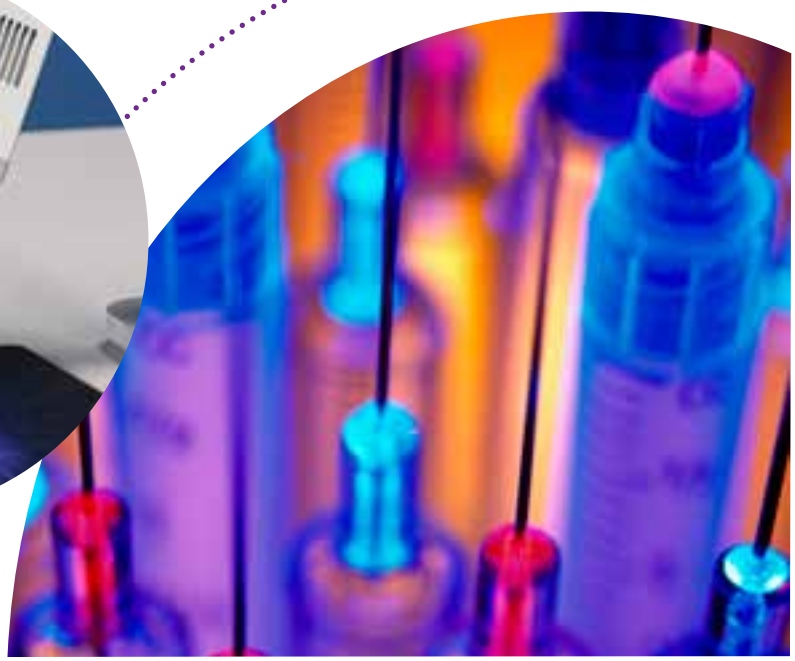
No Light Needed, Cures in Darkness - HLC® Adhesives

Dymax patented HLC® adhesives combine the best attributes of anionic and free radical chemistries into one. HLC® adhesives exhibit the exceptional physical and performance properties of Dymax standard light-curable materials and the rapid on-contact cure of anionics. The incorporation of contact curing allows these adhesives to be used with a larger range of substrates and provides curing in dark areas not reachable by light.

TPO-Free Adhesives

Dymax offers a line of TPO-free light-curable adhesives. Formulated without Trimethylbenzoyl Diphenylphosphine Oxide (TPO), these products offer the same trusted performance and reliability customers expect from Dymax while supporting long-term product planning.





Our Commitment to Greener, Safer Manufacturing

Dymax is committed to green manufacturing that reduces environmental impact, conserves energy, and provides greater worker safety. Over the last 40 years, our light-curable materials and curing equipment have become the industry standard for fast, environmentally conscious assembly. Dymax products are readily replacing technologies that contain hazardous ingredients, produce waste, or require higher amounts of energy to process.

Eco-friendly, one-component materials

Materials with no added solvents for improved worker and user safety

Fast curing products and equipment designed for less energy consumption

Dymax meets global statutory and regulatory requirements

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