

## FIBERLIGN® SUSPENSION

The **FIBERLIGN Suspension** uses a combination of structural reinforcing rods (SRR), outer rods, housing halves, and resilient inserts to reduce compression, clamping, and bending stresses on OPGW and the optical fibers within it.

### FEATURES AND BENEFITS

- Reduces negative effects of wind-induced cable motion, such as aeolian vibration, galloping, and sway
- Housing halves are captured by the aluminum strap for a low-stress assembly and suspended by a single galvanized steel bolt, washer, and locknut connection to prevent compression stress
- Inserts are made from an elastomer that is specifically formulated to resist deterioration from UV, weathering, extreme temperature variations, and compression set
- An aluminum alloy reinforcement is molded into each insert half for extreme loading
- A current transfer tab is included with all standard suspensions to provide a direct electrical bond between the OPGW and a ground lead
- The current transfer tab is captured between the outer rods of the OPGW and the SRR, simplifying installation as no fasteners are required and over torquing is avoided
- Housing assembly, SRR, and outer rods are made from a high-strength aluminum alloy
- An optional ground wire assembly can be included with the suspension
- SRR and outer rods cannot be reused. Hardware components can be reused if they are in good condition
- The FIBERLIGN Suspension has been thoroughly tested for vibration, mechanical loading, and optical attenuation in accordance with IEEE Standard 1138 and IEEE Standard 1591.1

## HOLDING STRENGTHS AND LINE ANGLES

Characteristic	Specification
Unbalanced/Slip Load	10% – 20% of standard OPGW rated strength
Maximum Vertical Load	Varies per suspension assembly (Consult suspension dimensional chart for specific ratings)
Maximum Line Angle	30 degrees for single suspension; 60 degrees for double suspension

## ATTACHMENT FITTINGS

- An Anchor Shackle (**Catalog Number: AS-5L**) can be included with standard single or double suspensions
- A Y-Clevis or Clevis Eye can be included with standard single suspensions. Y-Clevis and Clevis Eye catalog numbers are dependent on the suspension's cable diameter
- A Yoke Plate with two Clevis Eyes can be included with standard double suspensions. Yoke Plate and Clevis Eye catalog numbers are dependent on the suspension's cable diameter



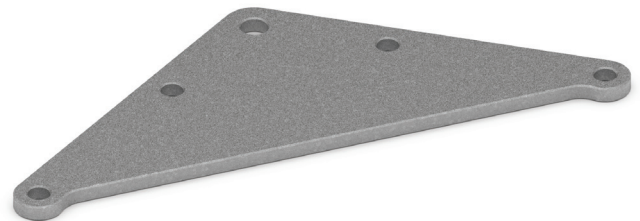
30,000 lb Anchor Shackle  
(Catalog Number: AS-5L)



Y-Clevis

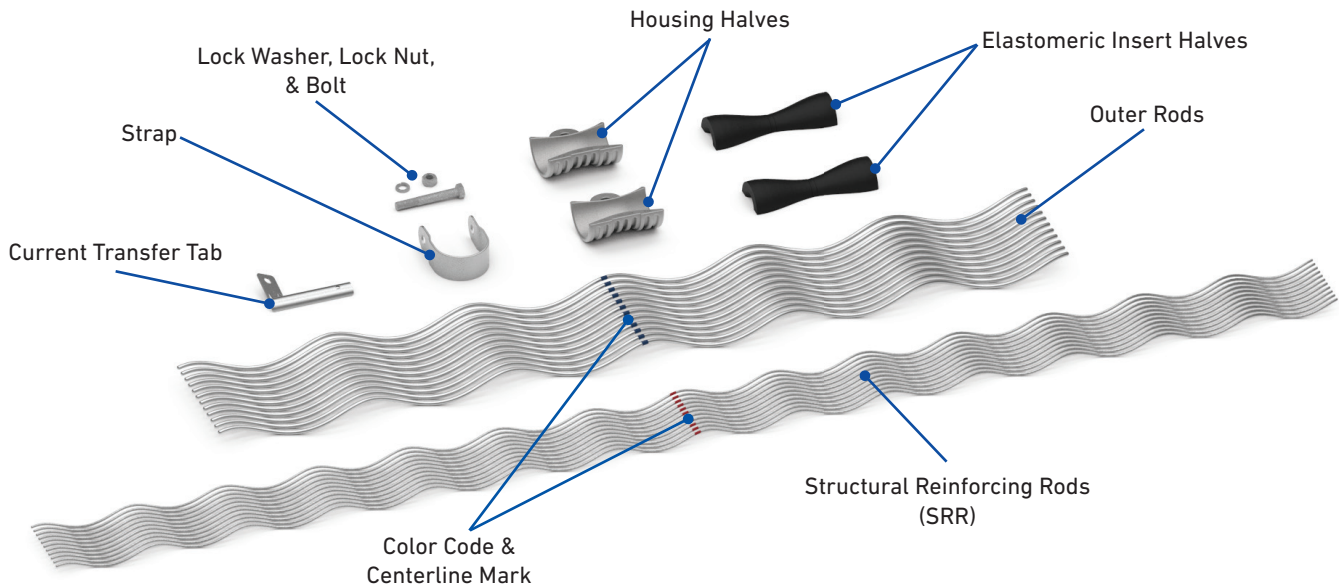


Clevis Eye



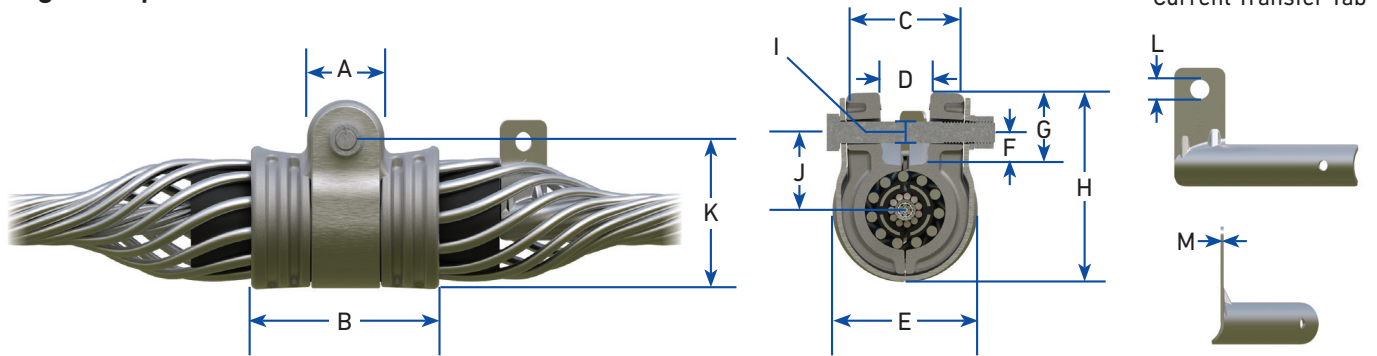
Yoke Plate

## COMPONENTS



## DIMENSIONS

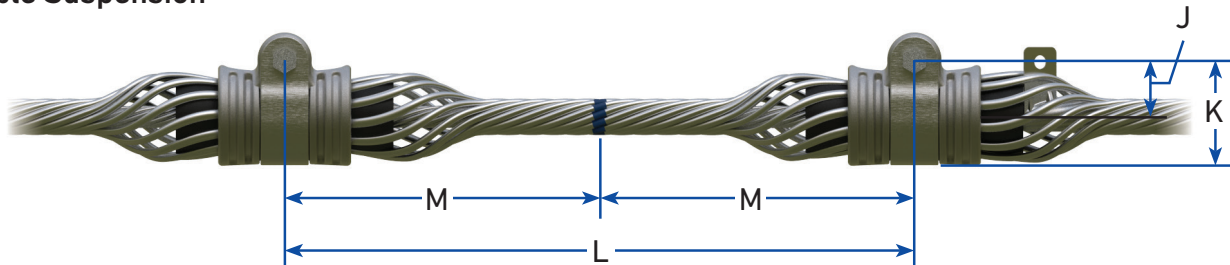
### Single Suspension



### FIBERLIGN Single Suspension

Cable Diameter Range	Dimensions												Maximum Vertical Load	
	in (mm)													
in (mm)	A	B	C	D	E	F	G	H	I	J	K	L	M	lb
0.354 – 0.458 (9.0 – 11.6)	1-3/4 (44.5)	3-3/4 (95.3)	2-1/4 (57.2)	3/4 (19.1)	2-3/16 (55.6)	1 (25.4)	1-7/8 (47.6)	4-7/16 (112.7)	5/8 (15.9)	2-5/32 (54.8)	3-9/16 (90.5)	9/16 (14.3)	3/32 (2.3)	15,000
0.459 – 0.565 (11.7 – 14.3)	2 (50.8)	4-17/32 (115.1)	2-11/16 (68.3)	7/8 (22.2)	3-5/16 (84.1)	1 (25.4)	2 (50.8)	5 (127.0)	5/8 (15.9)	2-11/32 (59.5)	4 (101.6)	9/16 (14.3)	3/32 (2.3)	20,000
0.566 – 0.625 (14.4 – 15.8)	2 (50.8)	5 (127.0)	2-15/16 (74.6)	7/8 (22.2)	3-11/16 (93.7)	1 (25.4)	2 (50.8)	5-3/8 (136.5)	5/8 (15.9)	2-17/32 (64.3)	4-3/8 (111.1)	9/16 (14.3)	3/32 (2.3)	20,000
0.626 – 0.750 (15.9 – 19.9)	2-1/4 (57.2)	5-1/2 (139.7)	3-1/2 (88.9)	1-3/16 (30.2)	4-5/32 (105.6)	1 (25.4)	2-1/8 (54.0)	5-29/32 (150.0)	5/8 (15.9)	2-23/32 (68.7)	4-25/32 (121.4)	9/16 (14.3)	3/32 (2.3)	25,000
0.751 – 0.786 (20.0 – 24.8)	2-1/4 (57.2)	5-1/2 (139.7)	3-1/2 (88.9)	1-3/16 (30.2)	4-5/32 (105.6)	1 (25.4)	2-1/8 (54.0)	5-29/32 (150.0)	5/8 (15.9)	2-23/32 (68.7)	4-25/32 (121.4)	5/8 (15.9)	3/16 (4.8)	25,000
0.787 – 0.977 (20.0 – 24.8)	2-1/4 (57.2)	6 (152.4)	3-5/8 (92.1)	1-1/4 (31.8)	4-13/16 (122.2)	1-1/4 (31.8)	2-3/8 (60.3)	6-11/16 (169.9)	3/4 (19.1)	3-5/32 (80.2)	5-9/16 (141.3)	5/8 (15.9)	3/16 (4.8)	25,000

### Double Suspension

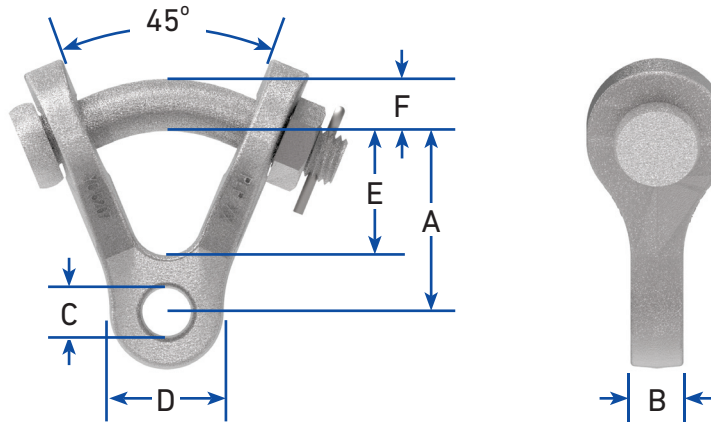


### FIBERLIGN Double Suspension

Cable Diameter Range		Dimensions				Maximum Vertical Load
in (mm)		in (mm)				
in	mm	J	K	L	M	lb
0.354 – 0.458	9.0 – 11.6	2-5/32 (54.8)	3-9/16 (90.4)	18 (457.2)	9 (228.6)	30,000
0.459 – 0.565	11.7 – 14.3	2-11/32 (59.5)	4 (101.6)	18 (457.2)	9 (228.6)	40,000
0.566 – 0.625	14.4 – 15.8	2-17/32 (64.3)	4-3/8 (111.1)	22 (558.8)	11 (279.4)	40,000
0.626 – 0.786	15.9 – 19.9	2-23/32 (68.7)	4-25/32 (121.4)	26 (660.4)	13 (330.2)	50,000
0.787 – 0.855	20.0 – 21.6	3-5/32 (80.2)	5-9/16 (141.3)	29 (736.6)	14-1/2 (368.3)	50,000
0.856 – 1.057	21.7 – 26.8	2-31/32 (75.4)	5-1/2 (139.7)	32 (812.8)	16 (406.4)	50,000

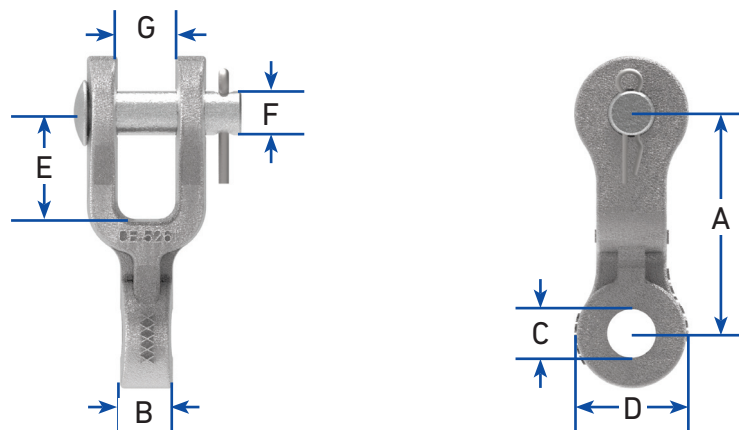
# DIMENSIONS

## Hardware Fittings



### Y-Clevis Eye

Catalog Number	Cable Diameter Range		Dimensions						Maximum Vertical Load
			in (mm)						
	in	mm	A	B	C	D	E	F	lb
YC-5206	0.354 – 0.458	9.0 – 11.6	2-7/16 (61.9)	5/8 (15.9)	11/16 (17.5)	1-5/8 (41.3)	1-5/8 (41.3)	3/4 (19.1)	15,000
YC-5207	0.459 – 0.625	11.7 – 15.9	2-7/16 (61.9)	3/4 (19.1)	11/16 (17.5)	1-5/8 (41.3)	1-5/8 (41.3)	3/4 (19.1)	20,000
YC-5209	0.626 – 1.057	16.0 – 26.8	2-7/16 (61.9)	1-1/16 (27.0)	13/16 (20.6)	1-5/8 (41.3)	1-5/8 (41.3)	3/4 (19.1)	25,000

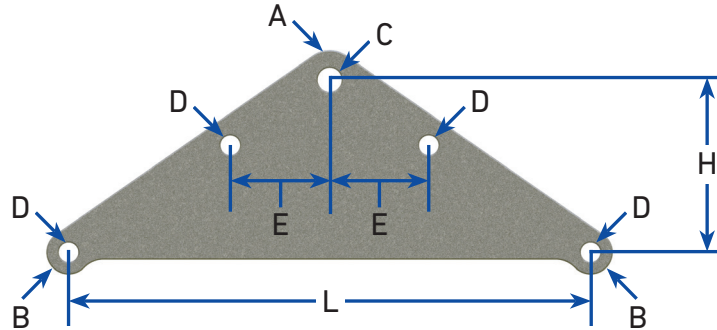


### Clevis Eye

Catalog Number	Cable Diameter Range		Dimensions							Maximum Vertical Load
			in (mm)							
	in	mm	A	B	C	D	E	F	G	lb
CE-5259	0.354 – 0.458	9.0 – 11.6	3-1/8 (79.4)	1/2 (12.7)	11/16 (17.5)	1-1/2 (38.1)	1-1/2 (38.1)	5/8 (15.9)	13/16 (20.6)	15,000
CE-5261	0.459 – 0.625	11.7 – 15.9	3-1/8 (79.4)	3/4 (19.1)	11/16 (17.5)	1-1/2 (38.1)	1-1/2 (38.1)	5/8 (15.9)	13/16 (20.6)	20,000
CE-5105	0.626 – 1.057	16.0 – 26.8	3-1/8 (79.4)	1-1/16 (27.0)	13/16 (20.6)	1-1/2 (38.1)	1-1/2 (38.1)	5/8 (15.9)	13/16 (20.6)	25,000

## DIMENSIONS

### Hardware Fittings



### Yoke Plate

Catalog Number	Cable Diameter Range		Dimensions							Plate Thickness
			in (mm)							
	in	mm	A (Radius)	B (Radius)	C (Dia.)	D (Dia.)	E	L	H	in (mm)
YP-5908	0.354 – 0.565	9.0 – 14.3	1-1/4 (31.8)	15/16 (23.8)	1 (25.4)	13/16 (20.6)	3-1/2 (88.9)	18 (457.2)	6-1/4 (158.8)	5/8 (15.9)
YP-5909	0.566 – 0.625	14.4 – 15.8	1-1/4 (31.8)	15/16 (23.8)	1" (25.4)	13/16 (20.6)	4-3/16 (106.4)	22 (558.8)	7-1/4 (184.2)	5/8 (15.9)
YP-5910	0.626 – 0.786	15.9 – 19.9	1-1/4 (31.8)	15/16 (23.8)	1 (25.4)	13/16 (20.6)	4-15/16 (125.4)	26 (660.4)	8-1/2 (215.9)	3/4 (19.1)
YP-5911	0.787 – 0.855	20.0 – 21.6	1-1/4 (31.8)	15/16 (23.8)	1 (25.4)	13/16 (20.6)	5-1/2 (139.7)	29 (736.6)	9-1/2 (241.3)	3/4 (19.1)
YP-5912	0.856 – 1.057	21.7 – 26.8	1-1/4 (31.8)	15/16 (23.8)	1 (25.4)	13/16 (20.6)	6-1/8 (155.6)	32 (812.8)	10-1/2 (266.7)	3/4 (19.1)

## ACCESSORIES

- All ground wire assemblies include attachment hardware (bolts, lock washers, nuts) for each terminal
- See DIMENSIONS for specific catalog numbers for Y-Clevis Eyes, Clevis Eyes, and Yoke Plates

Catalog Number	Suffix Code	Description
710010015	G	4 ft (1.2 m) Long #4 (7W) Copper Ground Wire Assembly with One Terminal for 1/2" Bolt
710010293	GA	4 ft (1.2 m) Long 4/0 (7W) Aluminum Ground Wire Assembly with One Terminal for 1/2" Bolt
710011205	GA2	5 ft (1.5 m) Long 95 mm <sup>2</sup> (19W) Aluminum Ground Wire Assembly with One Terminal for M12 Bolt and One Terminal for M16 Bolt
AS-5L	S2	30,000 lb Anchor Shackle
See DIMENSIONS	YC	(1) Y-Clevis to match the selected single suspension
See DIMENSIONS	CE	(1) Clevis Eye to match the selected single suspension
See DIMENSIONS	CEYP	(2) Clevis Eyes and (1) Yoke Plate to match the selected double suspension



## ORDERING INFORMATION

- Select the appropriate catalog number for the Suspension from the table below based on the diameter of the OPGW.
- Add the appropriate suffix code(s) to the Suspension catalog number to include a ground wire assembly and/or attachment fittings (ex: **Catalog Number: 4300100GYC, 4300100GACE, or 4300200GA2S2CEYP**) – see ACCESSORIES on the previous page for suffix codes.
- When adding suffix codes to the Suspension catalog number, make sure that the suffix code for the ground wire assembly comes **before** the suffix code(s) for the attachment fittings.
- Standard suspensions are offered for left-hand lay OPGW. Contact PLP with OPGW specifications for further information.

### FIBERLIGN Suspension

Catalog Number		Cable Diameter Range		SRR Specifications						Outer Rod Specifications					
				Rod Length		Rod Diameter		Rods per Set	Color Code	Rod Length		Rod Diameter		Rods per Set	Color Code
				Single	Double					Single	Double				
		in	mm	in (m)	in (m)	in	mm			in (m)	in (m)	in	mm		
4300100	4300200	0.354 – 0.381	9.0 – 9.6	66 (1.68)	84 (2.13)	0.146	3.7	9	Blue	42 (1.07)	60 (1.52)	0.204	5.2	11	Blue
4300101	4300201	0.382 – 0.398	9.7 – 10.0	66 (1.68)	84 (2.13)	0.146	3.7	9	Green	42 (1.07)	60 (1.52)	0.204	5.2	11	Green
4300102	4300202	0.399 – 0.418	10.1 – 10.5	66 (1.68)	84 (2.13)	0.146	3.7	10	Yellow	42 (1.07)	60 (1.52)	0.204	5.2	11	Yellow
4300103	4300203	0.419 – 0.439	10.6 – 11.1	67 (1.70)	84 (2.13)	0.146	3.7	10	Black	42 (1.07)	60 (1.52)	0.204	5.2	11	Black
4300104	4300204	0.440 – 0.458	11.2 – 11.6	68 (1.73)	84 (2.13)	0.146	3.7	11	White	43 (1.09)	61 (1.55)	0.204	5.2	11	White
4300105	4300205	0.459 – 0.461	11.7 – 11.6	72 (1.83)	90 (2.29)	0.167	4.2	10	Purple	46 (1.17)	64 (1.63)	0.250	6.4	10	Orange
4300106	4300206	0.462 – 0.476	11.7 – 12.0	72 (1.83)	90 (2.29)	0.167	4.2	10	Purple	46 (1.17)	64 (1.63)	0.250	6.4	10	Purple
4300107	4300207	0.477 – 0.503	12.1 – 12.7	72 (1.83)	90 (2.29)	0.146	3.7	11	Orange	46 (1.17)	64 (1.63)	0.250	6.4	10	Orange
4300108	4300208	0.504 – 0.511	12.8 – 12.9	73 (1.85)	90 (2.29)	0.146	3.7	12	Red	46 (1.17)	64 (1.63)	0.250	6.4	10	Purple
4300109	4300209	0.512 – 0.536	13.0 – 13.5	76 (1.93)	94 (2.39)	0.167	4.2	11	Blue	49 (1.24)	67 (1.70)	0.250	6.4	11	Blue
4300110	4300210	0.537 – 0.559	13.6 – 14.1	77 (1.96)	94 (2.39)	0.167	4.2	11	Green	49 (1.24)	67 (1.70)	0.250	6.4	11	Green
4300111	4300211	0.560 – 0.565	14.2 – 14.3	77 (1.96)	94 (2.39)	0.167	4.2	11	Green	49 (1.24)	67 (1.70)	0.250	6.4	11	Green
4300112	4300212	0.566 – 0.573	14.4 – 14.5	79 (2.01)	102 (2.59)	0.182	4.6	11	Black	54 (1.37)	76 (1.93)	0.250	6.4	12	Black
4300113	4300213	0.574 – 0.598	14.6 – 15.1	79 (2.01)	102 (2.59)	0.182	4.6	11	Black	54 (1.37)	76 (1.93)	0.250	6.4	12	White
4300114	4300214	0.599 – 0.625	15.2 – 15.8	81 (2.06)	102 (2.59)	0.182	4.6	11	Brown	54 (1.37)	76 (1.93)	0.250	6.4	12	Brown
4300116	4300216	0.626 – 0.632	15.9 – 16.0	94 (2.39)	120 (3.05)	0.204	5.2	11	Red	63 (1.60)	89 (2.26)	0.310	7.9	11	Red
4300117	4300217	0.633 – 0.666	16.1 – 16.8	94 (2.39)	120 (3.05)	0.204	5.2	11	Red	63 (1.60)	89 (2.26)	0.310	7.9	11	Blue
4300118	4300218	0.667 – 0.682	16.9 – 17.2	94 (2.39)	120 (3.05)	0.204	5.2	11	Yellow	63 (1.60)	89 (2.26)	0.310	7.9	11	Green
4300119	4300219	0.683 – 0.710	17.3 – 18.0	94 (2.39)	120 (3.05)	0.204	5.2	11	Yellow	63 (1.60)	89 (2.26)	0.310	7.9	11	Yellow
4300120	4300220	0.711 – 0.728	18.1 – 18.4	94 (2.39)	120 (3.05)	0.204	5.2	12	White	63 (1.60)	89 (2.26)	0.310	7.9	12	Black
4300121	4300221	0.729 – 0.744	18.5 – 18.8	94 (2.39)	120 (3.05)	0.204	5.2	12	White	63 (1.60)	89 (2.26)	0.310	7.9	12	White
4300122	4300222	0.745 – 0.750	18.9 – 19.0	94 (2.39)	120 (3.05)	0.204	5.2	12	White	63 (1.60)	89 (2.26)	0.310	7.9	12	White
4300123	4300223	0.751 – 0.786	19.1 – 19.9	94 (2.39)	120 (3.05)	0.204	5.2	12	Brown	63 (1.60)	89 (2.26)	0.310	9.3	12	Brown
4300124	4300224	0.787 – 0.814	20.0 – 20.6	100 (2.54)	120 (3.05)	0.250	6.4	11	Green	72 (1.83)	101 (2.57)	0.365	9.3	11	Green
4300125	4300225	0.815 – 0.845	20.7 – 21.4	100 (2.54)	129 (3.28)	0.250	6.4	11	Yellow	72 (1.83)	101 (2.57)	0.365	9.3	11	Yellow
4300126	4300226	0.846 – 0.855	21.5 – 21.6	100 (2.54)	129 (3.28)	0.250	6.4	11	Blue	72 (1.83)	101 (2.57)	0.365	9.3	12	Blue
4300127	4300227	0.856 – 0.894	21.7 – 22.6	100 (2.54)	132 (3.35)	0.250	6.4	12	Black	80 (2.03)	112 (2.85)	0.365	9.3	12	Black
4300128	4300228	0.895 – 0.907	22.7 – 23.0	100 (2.54)	132 (3.35)	0.250	6.4	12	White	80 (2.03)	112 (2.85)	0.365	9.3	12	White
4300129	4300229	0.908 – 0.916	23.1 – 23.2	100 (2.54)	132 (3.35)	0.250	6.4	12	Purple	80 (2.03)	112 (2.85)	0.365	9.3	12	Purple
4300153	4300253	0.917 – 0.929	23.3 – 23.5	100 (2.54)	132 (3.35)	0.250	6.4	12	Brown	80 (2.03)	112 (2.85)	0.365	9.3	12	Brown
4300154	4300254	0.930 – 0.942	23.6 – 23.9	100 (2.54)	132 (3.35)	0.250	6.4	12	Red	80 (2.03)	112 (2.85)	0.365	9.3	12	Red
4300155	4300255	0.943 – 0.977	24.0 – 24.8	100 (2.54)	132 (3.35)	0.250	6.4	12	Orange	80 (2.03)	112 (2.85)	0.365	9.3	13	Orange