

CASCADE LASER CORPORATION

Laser Safety Eyewear

Product Information



Figure 1: *Laser Safety Eyewear*

Notable Features:

- Optical density and corresponding wavelengths are clearly marked on all laser protection for ease of identification.
- Eyewear complies with ANSI Standard Z.136.1-2000 For Safe Use of Lasers.
- All eyewear includes a protective cover and instructions for proper use, care, and storage. Cleaning solution and a clean cloth are also included.
- All eyewear includes a safety strap to prevent accidental loss or damage to your eyewear.

Cascade Laser Corporation provides laser safety eyewear in a variety of frame styles. (shown on back of sheet) We offer an assortment of filters that protect against different laser wavelengths including the CO₂, UV, EXcimer, and Nd: YAG. Cascade Lasers' Safety Eyewear has been designed with consideration to both comfort and safety. Many different styles of frames are available, ranging from spectacles to goggles. Filters are offered in either polycarbonate or glass lenses, and prescription and CE certified lenses are available.



F1

F1 Spectacle

- Lightweight design for comfort during extended use.
- Integrated side and brow shields to ensure maximum protection.
- Contemporary styling.
- Excellent choice when prescription lenses are needed.



F2

F2 Spectacle

- Temple angle and length are adjustable providing personal fit and maximum comfort.
- Contemporary wrap around design.
- Large curved lens improves field of vision and reduces eye strain.

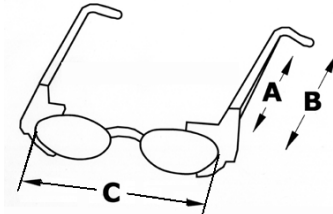


F5

F5 Spectacle

- Lightweight, wire-rimmed designer frame is very stylish and comfortable for long-term use.
- Frame has side shields with extra top and bottom protection.
- An excellent frame choice when prescription lenses are needed.
- Spring-hinged temples offer increased comfort and ruggedness
- Available in three sizes: small, medium & large.

	A	B	C
Small	4-1/2"	5-1/2"	4-5/8"
Medium	4-1/2"	5-3/4"	4-3/4"
Large	4-3/4"	5-7/8"	5"



F7

F7 Spectacle

- Stylish wrap-around frame that makes laser safety comfortable.
- Excellent peripheral vision, eliminating tunnel vision.
- Only available with 1200 series (D3).



**FITS OVER
SMALL FRAME
RX**

F8

F8 Spectacle

- Comfortably fits over small frame prescription glasses.
- Large lens for improved vision and reduced eye strain.
- Built-in shields for greater side protection and a close fit.
- F8 is the smaller sized version of F9. For regular size version see F9 Spectacle below.



FITS OVER RX

F9

F9 Spectacle

- Comfortable "fit-over" that actually fits over prescription glasses.
- Large lens for improved vision and reduced eye strain.
- Built-in shields for greater side protection and a close fit.
- Available in smaller sizes for smaller sized people. (see F8 Spectacle)



G1

G1 Goggle

- Durable strain-resistant cloth padding ensures maximum comfort and long term wearability.
- Unique ventilation design provides fog-free vision.
- Goggle fits easily over prescription eyewear.
- Large teardrop shaped lens provides increased visibility.



S1

S1 Face Shield

- Lightweight polymer shield is fully adjustable for comfortable fit.
- Visor design provides maximum visibility and full face protection.
- Visor fits easily over prescription eyewear and flips up when protection is not required.





P2


P2 Patient Goggle

P2 is a new design in patient eyewear for multiple applications. The patented design offers maximum flexibility while maintaining a high level of safety and comfort. The P2's unique design will facilitate all patients needs for protection with easy to adjust eyepieces and a securing soft elastic-braided strap that can be easily adjusted for a great fit.






Glass Maximum Laser Protection (page 4-6)

Filter	Visibility	Color	CO2	UV	EXcimer	Argon	KTP	Dye	HeNe	Ruby	Alex	Nd:Yag	Ho:Yag	Er:Yag	IR-Diodes
I101	Excellent	Clear	5	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
I102	Excellent	Yellow	5	6	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
I103	Excellent	Orange	5	6	6	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
I104	Good	Orange/Red	5	6	6	6	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
I105	Fair	Red	5	6	6	6	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
I106	Good	Amber	5	6	6	6	N/A	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
															
I107	Excellent	Purple	5	N/A	N/A	N/A	N/A	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
I108	Good	Blue/Green	5	N/A	N/A	N/A	N/A	2	3	8	8	N/A	N/A	N/A	N/A
I109	Fair	Blue	5	N/A	N/A	N/A	N/A	4	7	7	5	N/A	N/A	N/A	N/A
I110	Excellent	Clear	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5	4	4	4
															
I111	Excellent	Clear	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7	5	5	5
I118	Good	Orange	5	6	6	6	6	N/A	N/A	N/A	N/A	5	4	4	4
I119	Good	Green	5	6	6	6	N/A	2	3	8	8	N/A	N/A	N/A	N/A
I122	Good	Orange	5	6	6	6	6	N/A	N/A	N/A	N/A	7	5	5	5
I125	Poor	Blue	5	N/A	N/A	N/A	6	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
I126	Fair	Brown	5	6	6	6	6	N/A	2	6	8	8	N/A	N/A	N/A
I130	Excellent	Amber Brown	5	N/A	N/A	N/A	3	5	N/A	N/A	6	N/A	N/A	N/A	N/A
I138	Good	Deep Blue	5	N/A	N/A	N/A	N/A	6	2	6	6	8	N/A	N/A	N/A
I139	Excellent	Purple	5	N/A	N/A	N/A	N/A	6	N/A	N/A	N/A	5	4	4	4
I140	Excellent	Purple	5	N/A	N/A	N/A	N/A	6	N/A	N/A	N/A	7	5	5	5
I141	Fair	Red	5	6	6	6	6	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Coated High Visibility Laser Protection (page 7-8)


Filter	Visibility	Color	CO2	UV	EXcimer	Argon	KTP	Dye	HeNe	Ruby	Alex	Diode 1	Diode 2	Diode 3	Nd:Yag	Ho:Yag	Er:Yag	IR-Diodes
I112	Excellent	Purple	5	N/A	N/A	N/A	N/A	6	N/A	N/A	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
I113	Fair	Green	5	N/A	N/A	N/A	N/A	5.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
I114	Excellent	Clear	5	N/A	N/A	N/A	N/A	N/A	N/A	6	6	6	4	4	5	4	4	4
I116	Good	Orange	5	6	6	6	6	N/A	N/A	6	6	6	4	4	5	4	4	4
																		
I117	Excellent	Clear	5	N/A	N/A	N/A	N/A	N/A	N/A	7	7	7	4	5	7	5	5	5
I127	Excellent	Clear	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5	5	5	5	4	4	4
I128	Excellent	Clear	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7	7	7	7	5	5	5
I129	Excellent	Orange	5	6	6	6	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	N/A	N/A	N/A
I131	Excellent	Orange	5	6	6	6	6	N/A	N/A	7	7	7	4	5	7	5	5	5
I137	Excellent	Purple	5	N/A	N/A	N/A	1	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
I150	Excellent	Clear	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5	4	N/A	N/A	N/A	N/A	N/A
I151	Excellent	Clear	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5	N/A	N/A	N/A	N/A
I152	Excellent	Clear	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5	N/A	N/A	N/A

Polycarbonate Diffuse Viewing Protection (page 9)


Filter	Visibility	Color	CO2	UV	EXcimer	Argon	KTP	Dye	HeNe	Ruby	Alex	Diode 1	Diode 2	Diode 3	Nd:Yag	Ho:Yag	Er:Yag	IR-Diodes
																		
I201	Excellent	Clear	6	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
																		
I202	Excellent	Yellow	6	5	5	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
																		
I203	Good	Orange	6	5	5	4	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
I204	Excellent	Light Blue	6	5	N/A	N/A	N/A	N/A	2	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
																		
I205	Excellent	Amber-Pink-Brown	6	5	N/A	N/A	N/A	N/A	N/A	N/A	7	7	N/A	N/A	N/A	N/A	N/A	N/A
I206	Good	Green	6	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5	6	N/A	N/A	N/A
																		
I207	Fair	Brown	6	5	4	4	4	N/A	N/A	N/A	N/A	N/A	N/A	4	5	N/A	N/A	N/A
I208	Good	Pink	6	5	5	-	1-2	N/A	N/A	N/A	N/A	N/A	N/A	-	-	N/A	N/A	N/A

Maximum Visibility Laser Eye Protection

Highest Quality Filter Glass for the utmost protection. Engineered for maximum optical density.
(Rx = Prescription Lenses Available)

Filter	Filter Specification	Color	Visibility	Style
1100	OD 7+ @ 10,000 - 11,000 nm	Clear	Excellent	F.1 Rx F.2 F.5 Rx F.8 F.9 G.1 P.1
1101	OD 6+ @ 190-380 nm OD 5+ @ 10,600 nm	Clear	Excellent	F.1 Rx F.2 F.5 Rx F.8 F.9 G.1 P.1
1102	OD 4+ @ 190-450 nm OD 5+ @ 10,600 nm	Yellow	Excellent	F.1 Rx F.2 F.5 Rx F.8 F.9 G.1 P.1
1103	OD 6+ @ 190-520 nm OD 5+ @ 10,600 nm	Orange	Excellent	F.1 Rx F.2 F.5 Rx F.8 F.9 G.1 P.1
1104	OD 5+ @ 190-540 nm OD 5+ @ 10,600 nm	Orange/Red	Good	F.1 Rx F.2 F.5 Rx F.8 F.9 G.1 P.1
1105	OD 6+ @ 190-580 nm OD 5+ @ 10,600 nm	Red	Fair	F.1 Rx F.2 F.5 Rx F.8 F.9 G.1 P.1
1106	OD 5+ @ 190-520 nm OD 6+ @ 577-590 nm OD 5+ @ 10,600 nm	Amber	Good	F.1 F.2 F.5 F.8 F.9 G.1 P.1
1107 	OD 3+ @ 570-595 nm OD 6+ @ 583-590 nm OD 5+ @ 10,600 nm	Purple	Excellent	F.1 Rx F.2 F.5 Rx F.8 F.9 G.1 P.1

Maximum Visibility Laser Eye Protection Continued

Filter	Filter Specification	Color	Visibility	Style
1108	OD 2+ @ 632nm OD 3+ @ 650-690nm OD 6+ @ 690-1330nm OD 5+ @ 10,600nm	Blue/Green	Good	F1 Rx F2 F5 Rx F8 F9 G1
1109	OD 4+ @ 630-690nm OD 7+ @ 690-970nm OD 5+ @ 970-1100nm OD 5+ @ 10,600nm	Blue	Fair	F1 Rx F2 F5 Rx F8 F9 G1
1110	OD 4+ @ 950-1050nm OD 5+ @ 1050-1500nm OD 4+ @ 1500-2300nm OD 4+ @ 2900-5200nm OD 5+ @ 10,600nm	Clear	Excellent	F1 Rx F2 F5 Rx F8 F9 G1
1111 * 	OD 3+ @ 850-900nm OD 4+ @ 900-950nm OD 5+ @ 950-1000nm OD 7+ @ 1000-1600nm OD 5+ @ 1600-2400nm OD 5+ @ 2940 & 10,600nm	Clear	Excellent	F1 Rx F2 * F5 Rx F8 F9 G1 *
1118	OD 6+ @ 190-540nm OD 4+ @ 950-1050nm OD 5+ @ 1050-1500nm OD 4+ @ 1500-2300nm OD 4+ @ 2900-5200nm OD 5+ @ 10,600nm	Orange	Good	F1 F5 G1
1119	OD 6+ @ 190-520nm OD 2+ @ 632nm OD 3+ @ 650-690nm OD 6+ @ 690-710nm OD 8+ @ 710-1200nm OD 5+ @ 10,600nm	Green	Good	F1 F5 G1
1122	OD 6+ @ 190-540nm OD 3+ @ 850-900nm OD 4+ @ 900-950nm OD 5+ @ 950-1000nm OD 7+ @ 1000-1600nm OD 5+ @ 1600-2400nm OD 5+ @ 2940 & 10,600nm	Orange	Good	F1 F5 G1
1125	OD 6+ @ 510-680nm OD 5+ @ 10,600nm	Blue	Poor	F1 Rx F2 F5 Rx F8 F9 G1


Maximum Visibility Laser Eye Protection Continued

Filter	Filter Specification	Color	Visibility	Style
1126	OD 6+ @ 190-540nm OD 2+ @ 632nm OD 3+ @ 650-690nm OD 6+ @ 690-710nm OD 8+ @ 710-1200nm OD 5+ @ 10,600nm	Brown	Fair	F1 F5 G1
1130	OD 3+ @ 520-530 & 568nm OD 2-3 @ 532nm OD 5+ @ 570-595nm OD 6+ @ 755 & 795-810nm	Amber/Brown	Excellent	F1 Rx F2 F5 Rx F8 F9 G1
1138	OD 6+ @ 577-590nm OD 2+ @ 632nm OD 3+ @ 650-690nm OD 6+ @ 690-710nm OD 8+ @ 710-1200nm OD 5+ @ 10,600nm	Deep Blue	Good	F1 F5 G1
1139	OD 6+ @ 577-590nm OD 4+ @ 950-1050nm OD 5+ @ 1050-1500nm OD 4+ @ 1500-2300nm OD 4+ @ 2900-5200nm OD 5+ @ 10,600nm	Purple	Excellent	F1 F5 G1
1140	OD 6+ @ 577-590nm OD 3+ @ 850-900nm OD 4+ @ 900-950nm OD 5+ @ 950-1000nm OD 7+ @ 1000-1600nm OD 5+ @ 1600-2400nm OD 5+ @ 2940nm & 10,600nm	Purple	Excellent	F1 F5 G1
1141	OD 6+ @ 190-540nm OD 6+ @ 577-590nm OD 5+ @ 10,600nm	Red	Fair	F1 Rx F5 Rx G1
1160	OD 4+ @ 510-532nm OD 6+ @ 575-595nm OD 5+ @ 596-597nm OD 4+ @ 598-600nm OD 2+ @ 601-603nm OD 6+ @ 740-755nm OD 6+ @ 800-812nm	Amber/Pink/Brown	Excellent	F1 F5 G1
1161	OD 6+ @ 577-590nm	Purple	Excellent	F1 Rx F2 F5 Rx F8 F9 G1

High Visibility Laser Eye Protection

Filter glass plus specialized dielectric thin film coating for maximum viewing visibility.

(Rx= Prescription Lens Available)

Filter	Filter Specification	Color	Visibility	Style
1112	OD 6+ @ 577-590nm OD 6+ @ 755nm OD 5+ @ 10,600nm	Purple	Excellent	F1 Rx F2 F5 Rx F9 G1
1113	T% 10+ @ 543nm OD 5.5+ @ 583-605nm OD 5+ @ 10,600nm	Green	Fair	F1 Rx F2 F5 Rx F9 G1
1114	T% 20+ @ 633nm OD 6+ @ 690-760nm OD 4+ @ 950-1050nm OD 5+ @ 1050-1500nm OD 4+ @ 1500-2300nm OD 4+ @ 2900-5200nm OD 5+ @ 10,600nm	Clear	Excellent	F1 Rx F2 F5 Rx F9 G1
1116	OD 6+ @ 190-540nm T% 20+ @ 633nm OD 6+ @ 690-850nm OD 4+ @ 950-1050nm OD 5+ @ 1050-1500nm OD 4+ @ 1500-2300nm OD 4+ @ 2900-5200nm OD 5+ @ 10,600nm	Orange	Good	F1 F2 F5 F9 G1
1117 * 	T% 20+ @ 633nm OD 7+ @ 690-760nm OD 4+ @ 760-950nm OD 5+ @ 950-1000nm OD 7+ @ 1000-1600nm OD 5+ @ 1600-2400nm OD 5+ @ 2940nm OD 5+ @ 10,600nm	Clear	Excellent	F1 Rx F2 * F5 Rx F9 G1 *
1127	OD 5+ @ 800-1500nm OD 4+ @ 1500-2300nm OD 4+ @ 2900-5200nm OD 5+ @ 10,600nm	Clear	Excellent	F1 Rx F2 F5 Rx F9 G1

High Visibility Laser Eye Protection Continued






1128	OD 7+ @ 800-1600nm OD 5+ @ 1600-2400nm OD 5+ @ 2940nm OD 5+ @ 10,600nm	Clear	Excellent	F1 Rx F2 F5 Rx F9 G1
1129	OD 6+ @ 190-540nm OD 4+ @ 1064nm OD 5+ @ 10,600nm	Orange	Excellent	F1 Rx F2 F5 Rx F9 G1
1131	OD 6+ @ 190-540nm T% 20+ @ 633nm OD 7+ @ 690-850nm OD 3+ @ 850-900nm OD 4+ @ 900-950nm OD 5+ @ 950-1000nm OD 7+ @ 1000-1600nm OD 5+ @ 1600-2400nm OD 5+ @ 2940nm OD 5+ @ 10,600nm	Orange	Excellent	F1 F5 G1
1137	OD 1-2 @ 532nm OD 5+ @ 577-650nm	Purple	Excellent	F1 F2 F5 F9 G1
1150	OD 4+ @ 800-900nm OD 5+ @ 810nm	Clear	Excellent	F1 Rx F2 F5 Rx F9 G1
1151	OD 5+ @ 900-1000nm	Clear	Excellent	F1 Rx F2 F5 Rx F9 G1
1152	OD 5+ @ 1000-1100nm	Clear	Excellent	F1 Rx F2 F5 Rx F9 G1

Diffuse Laser Eye Protection

(Lightweight Polycarbonate Filters)

Maximum Comfort and Affordability

(Rx= Prescription Lens Available)

Filter	Filter Specification	Color	Visibility	Style
1201 * 	OD 5+ @ 190-375nm OD 6+ @ 10,600nm	Clear	Excellent	F1 Rx F2 * F5 F7 F9 G1 *
1202 * 	OD 5+ @ 190-400nm OD 3+ @ 450-425nm OD 5+ @ 425-475nm OD 6+ @ 10,600nm	Yellow	Excellent	F1 F2 * F5 F7 F9 G1 *
1203 * 	OD 4+ @ 190-532nm OD 6+ @ 10,600nm	Orange	Good	F1 F2 * F5 F7 F9 G1 *
1204	OD 5+ @ 190-375nm OD 2-3 @ 630-660nm OD 3+ @ 660-690nm OD 6+ @ 690-700nm OD 6+ @ 10,600nm	Light Blue	Excellent	F1 F2 F5 F7 F9 G1
1205 * 	OD 5+ @ 190-375nm OD 4+ @ 730-855nm OD 7+ @ 755-840nm OD 6+ @ 10,600nm	Amber-Pink-Brown	Excellent	F1 F2 * F5 F7 F9 G1 *
1206	OD 5+ @ 190-375nm OD 5+ @ 900-1070nm OD 6+ @ 1064nm OD 6+ @ 10,600nm	Green	Good	F1 F2 F5 F7 F9 G1
1207 * 	OD 5+ @ 190-375nm OD 4+ @ 375-532nm OD 4+ @ 900-1070nm OD 5+ @ 1064nm OD 6+ @ 10,600nm	Brown	Fair	F1 F2 * F5 F7 F9 G1 *
1208	OD 5+ @ 190-375nm OD 1-2 @ 532nm OD 6+ @ 10,600	Pink	Good	F1 F2 F5 F7 F9 G1

Laser Alignment Eyewear

Offers reduced exposure to laser transmissions.

NOT DESIGNED FOR DIRECT OR DIFFUSE VIEWING OF LASER BEAM.

We can easily customize alignment eyewear for your application.

Filter	Filter Specification	Color	Visibility	Style
0002	OD 1-2 @ 488nm	Yellow	Excellent	F1 F2 F5 F7 F9 G1
0003	OD 2-3 @ 532nm	Orange	Excellent	F1 F2 F5 F7 F9 G1
0004	OD 1-2 @ 532nm OD 6+ @ 583-590nm	Purple	Excellent	F1 F2 F5 F7 F9 G1
0005	OD 1-2 @ 532nm	Pink	Good	F1 F2 F5 F7 F9 G1
0006	OD 2-3 @ 532nm OD 5+ @ 1000-1550nm	Orange	Excellent	F1 F5 G1
0007	OD 2-3 @ 532nm OD 7+ @ 1000-1600nm	Orange	Excellent	F1 F5 G1
0008	OD 2-3 @ 532nm OD 6+ @ 690-1330nm	Green	Excellent	F1 F5 G1
0009	OD 1-2 @ 532nm OD 6+ @ 690-1330nm	Blue	Good	F1 F5 G1
0010	OD 1-2 @ 532nm OD 5+ @ 1000-1550nm	Purple	Excellent	F1 F5 G1
0011	OD 1-2 @ 532nm OD 7+ @ 1000-1600nm	Purple	Excellent	F1 F5 G1

Contact Cascade Laser Corporation for ordering information or to request a quotation on any of these products.

Cascade Laser Corp.

101 N. Elliott Rd.

Newberg, OR 97132

Phone: 503-554-1926

Toll Free: 800-443-5561

Fax: 503-554-8285

E-mail: info@cascadelaser.com

Web: www.cascadelaser.com

*Laser Safety Eyewear
Revised: December 2003*