

**YL-250G**



Provide high transmittance and visibility.



- High damage threshold.
- Excellent resistance to breaking and scratches.

| Common Specifications    |                                      |
|--------------------------|--------------------------------------|
| Frame                    | Nylon                                |
| Lens                     | Reinforced glass                     |
| Specifications           | Compatible with prescription glasses |
| External Dimensions [mm] | (W)155×(H)57×(D)141                  |
| Weight [kg]              | 0.07                                 |

| Part Number       | Type                  | Compatible Laser | Wavelength [nm] | Optical Density [OD] | Lens Color | Visible Light Transmittance [%] |
|-------------------|-----------------------|------------------|-----------------|----------------------|------------|---------------------------------|
| <b>YL-250G-3Y</b> | Reinforced glass type | Nd-YAG:OD3(3Y)   | 780             | 0,8<                 | Green      | 80                              |
|                   |                       |                  | 980             | 3<                   |            |                                 |
|                   |                       |                  | 1064            | 3<                   |            |                                 |
|                   |                       |                  | 1310, 1550      | 2<                   |            |                                 |
|                   |                       |                  | 2100, 2940      | 2<                   |            |                                 |
| <b>YL-250G-5Y</b> | Reinforced glass type | Nd-YAG:OD5(5Y)   | 1064            | 5<                   | Green      | 74                              |
| <b>YL-250G-7Y</b> | Reinforced glass type | Nd-YAG:OD7(7Y)   | 1064            | 7<                   | Green      | 69                              |
|                   |                       |                  | 2100, 2940      | 5<                   |            |                                 |

**YL-130**



Google design for complete protection and fit over prescription glasses.



- Hardened glasses and anti-fog coating.
- Optional parts for supporting use in clean room (fasteners for adjustment, with hard cases) are available.

| Common Specifications    |  |
|--------------------------|--|
| Frame                    | PP elastomer   |
| Lens                     | Polycarbonate (anti-fog hard coated)                           |
| Specifications           | Compatible with prescription glasses (some glasses do not fit) |
| External Dimensions [mm] | (W)192×(H)83×(D)92   |
| Weight [kg]              | 0.09   |

| Part Number          | Type                                 | Compatible Laser | Wavelength [nm] | Optical Density [OD] | Lens Color | Visible Light Transmittance [%] |
|----------------------|--------------------------------------|------------------|-----------------|----------------------|------------|---------------------------------|
| <b>YL-130-EX</b>     | Complete absorption                  | EXCIMER          | 190 – 380       | 10<                  | Clear      | 85                              |
| <b>YL-130-Y2</b>     | Complete absorption                  | YAG2 $\omega$    | 532             | 10<                  | Red        | 16                              |
| <b>YL-130-ALX</b>    | Complete absorption                  | ALEXANDRITE      | 750 – 800 – 850 | 4–10–4<              | Pink       | 30                              |
| <b>YL-130-Y1(50)</b> | Complete absorption                  | YAG              | 1064            | 6<                   | Green      | 50                              |
| <b>YL-130C-Y2</b>    | Complete absorption multi-wavelength | YAG              | 266, 355        | 10<                  | Amber      | 35                              |
|                      |                                      |                  | 532             | 4<                   |            |                                 |
| <b>YL-130M-Y2</b>    | Partially transmitting, OD2          | YAG2 $\omega$    | 532             | 2<                   | Red        | 30                              |
|                      |                                      |                  | 1064            | 6<                   |            |                                 |
| <b>YL-130M-VLD</b>   | Partially transmitting, OD2          | LD               | 660 – 680       | 2<                   | Blue       | 55                              |
|                      |                                      |                  | 647.1, 676.4    |                      |            |                                 |

**YL-120H**



Provide high transmittance and visibility.  
 Both frame and lens have high damage threshold.



- Guide**
- ▶ Damage threshold stands for the value of laser power when the lenses and frame start to have damages in case of receiving direct laser beam.

| Common Specifications    |                                      |
|--------------------------|--------------------------------------|
| Frame                    | Special laminating resin             |
| Lens                     | Special laminating glass             |
| Specifications           | Compatible with prescription glasses |
| External Dimensions [mm] | (W)160×(H)80×(D)73                   |
| Weight [kg]              | 0.16                                 |

| Part Number        | Type                  | Compatible Laser | Wavelength [nm] | Optical Density [OD] | Lens Color | Visible Light Transmittance [%] |
|--------------------|-----------------------|------------------|-----------------|----------------------|------------|---------------------------------|
| <b>YL-120H-Y1</b>  | Reinforced glass type | YAG              | 1064, 1319,5    | 7<                   | Green      | 67                              |
|                    |                       |                  | 1060            |                      |            |                                 |
|                    |                       |                  | 1319,5          |                      |            |                                 |
| <b>YL-120H-CO2</b> | Reinforced glass type | CO <sub>2</sub>  | 10600           | 10<                  | Clear      | 86                              |
|                    |                       |                  | 193, 248, 308   |                      |            |                                 |

\*1 Damage threshold: Value indicating the degree of power at which damage occurs if laser light is irradiated.

Application Systems

Optics & Optical Coatings

Opto-Mechanics

Bases

Manual Stages

Actuators & Adjusters

Motoeized Stages

Light Sources & Laser Safety

Index

Guide

Lasers

Detectors

Laser Safety Equipments

Light Sources

# Laser Protective Eyewear Filter Spectra

## Filter Spectra

Application Systems

Optics & Optical Coatings

Opto-Mechanics

Bases

Manual Stages

Actuators & Adjusters

MotORIZED Stages

Light Sources & Laser Safety

Index

Guide

Lasers

Detectors

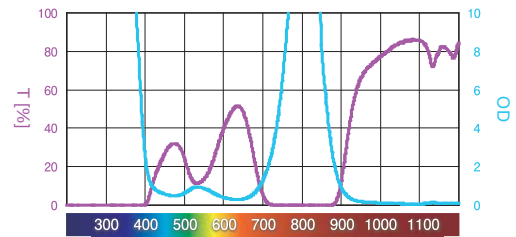
Laser Safety Equipments

Light Sources

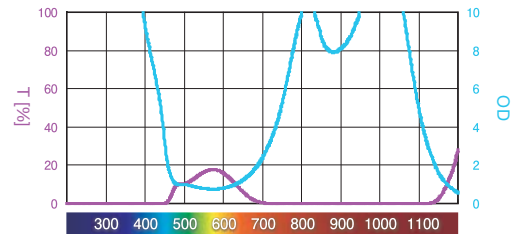
### Complete absorption type

Normally, you cannot see visible laser light because the optical density is set to high. T: Transmittance

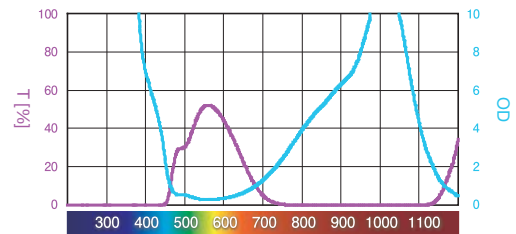
|                             |                                    |         |
|-----------------------------|------------------------------------|---------|
| Frame Type                  | YL-130 YL-760 YL-717 YL-335 YL-290 |         |
| Lens Type                   | ALEXANDRITE                        |         |
| Color                       | Pink                               |         |
| Visible Light Transmittance | 30%                                |         |
| Optical Density [OD]        |                                    |         |
| ALEXANDRITE                 | 755nm                              | 6<      |
| LD                          | 750 – 850nm                        | 4 – 10< |
|                             | 800nm                              | 10<     |
|                             | 750 – 850nm                        | 4<      |



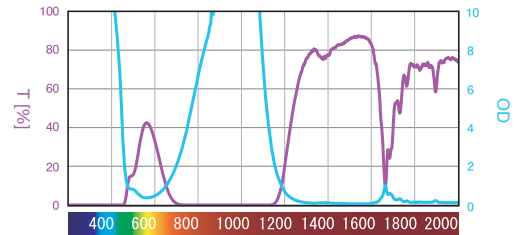
|                             |               |    |
|-----------------------------|---------------|----|
| Frame Type                  | YL-335 YL-760 |    |
| Lens Type                   | LD-YAG        |    |
| Color                       | Green         |    |
| Visible Light Transmittance | 35%           |    |
| Optical Density [OD]        |               |    |
| FIBER LASER                 | 800 – 1080nm  | 6< |
| YAG                         | 1064nm        | 7< |
| LD                          | 800 – 810nm   | 7< |
|                             | 940nm         | 7< |



|                             |                                    |    |
|-----------------------------|------------------------------------|----|
| Frame Type                  | YL-130 YL-760 YL-717 YL-335 YL-290 |    |
| Lens Type                   | YAG                                |    |
| Color                       | Green                              |    |
| Visible Light Transmittance | 50%                                |    |
| Optical Density [OD]        |                                    |    |
| Nd-YLF                      | 1047nm 1053nm                      | 6< |
| YAG                         | 1064nm                             | 6< |



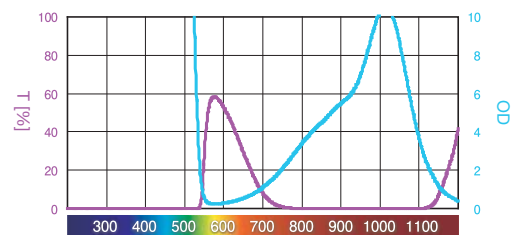
|                             |              |    |
|-----------------------------|--------------|----|
| Frame Type                  | YL-717       |    |
| Lens Type                   | NIR Fiber    |    |
| Color                       | Green        |    |
| Visible Light Transmittance | 35%          |    |
| Optical Density [OD]        |              |    |
| CO <sub>2</sub>             | 810 – 1100nm | 7< |



### Multi-wavelength compatible type

One filter handles multiple wavelengths of laser.

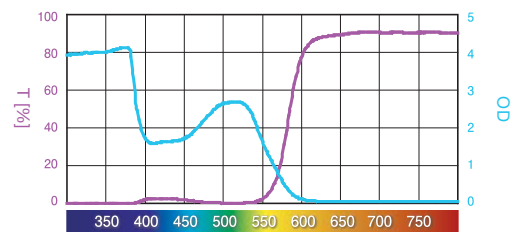
|                             |                                    |     |
|-----------------------------|------------------------------------|-----|
| Frame Type                  | YL-130 YL-760 YL-717 YL-335 YL-290 |     |
| Lens Type                   | C-YAG2                             |     |
| Color                       | Amber                              |     |
| Visible Light Transmittance | 40%                                |     |
| Optical Density [OD]        |                                    |     |
| YAG                         | 226nm                              | 10< |
|                             | 355nm                              | 10< |
|                             | 532nm                              | 4<  |
|                             | 1064nm                             | 6<  |



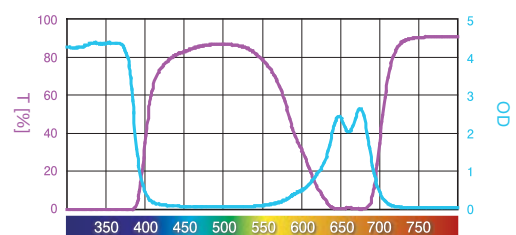
### 1/100 attenuation partially transmitting type for maintenance

For maintenance for 100mW or less (optical density 1 – 2). Use this type for checking optical paths or adjusting optical axes.

|                             |                                    |    |
|-----------------------------|------------------------------------|----|
| Frame Type                  | YL-130 YL-760 YL-717 YL-335 YL-290 |    |
| Lens Type                   | M-YAG2ω                            |    |
| Color                       | Red                                |    |
| Visible Light Transmittance | 30%                                |    |
| Optical Density [OD]        |                                    |    |
| YAG2ω                       | 532nm                              | 2< |



|                             |                                    |    |
|-----------------------------|------------------------------------|----|
| Frame Type                  | YL-130 YL-760 YL-717 YL-335 YL-290 |    |
| Lens Type                   | M-VLD                              |    |
| Color                       | Blue                               |    |
| Visible Light Transmittance | 55%                                |    |
| Optical Density [OD]        |                                    |    |
| LD                          | 660 – 680nm                        | 2< |
| Kr                          | 647.1nm                            | 2< |
|                             | 676.4nm                            | 2< |



\* Note that the graphs of optical density show measured values, not guaranteed values.