# LGO115 & LGO145
## Line & Cross Generator Optics

# Product Overview

The LGO/CGO115 and LGO/CGO145 series of line-generating optics (LGO) and cross-generating optics (CGO) simply fit over the aperture end of the LDM115 and LDM145 to convert the output beam into a line or cross. LGOs and CGOs are available with fan angles from 15° to 120°, and have been specifically designed for use with the LDM115G and LDM145G range of Imatronic Laser Diode Modules.

DOEs that produce circles, concentric rings, dotted patterns, crosses, multiple parallel lines, grids, viewfinders, and other patterns are also available.

**Please follow the below instructions to install the LDM115/LDM145 with an LGO, CGO, or DOE:**

1. Focus the laser at the required distance.
2. Using the supplied Allen key, ensure that the two grub screws in the LGO/CGO/DOE are flush with the inner bore.
3. Slide the LGO/CGO/DOE over the aperture side of the laser and rotate until the brightest & thinnest lines or dots are achieved.
4. Tighten the two grub screws with the Allen key to lock the LGO/CGO/DOE into position.

**For a complete list of compatible DOEs please see the Projection Lens datasheet.**

# LGO115 & LGO145
## Line & Cross Generator Optics

# Model Table

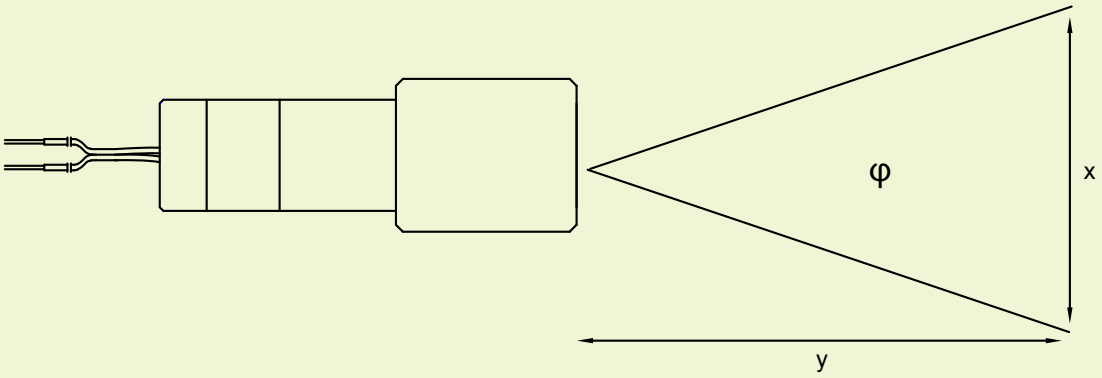
| LGO115 | Fan Angle (°) | CGO115 | Fan Angle (°) | LGO145 | Fan Angle (°) | CGO145 | Fan Angle (°) |
|---|---|---|---|---|---|---|---|
| **LGO115/15** | 15° | **CG0115/14** | 14° | **LGO145/15** | 15° | **CGO145/15** | 14° |
| **LGO115/28** | 28° | **CGO115/60** | 60° | **LGO145/28** | 28° | **CGO145/60** | 60° |
| **LGO115/40** | 40° | **CGO115/85** | 85° | **LGO145/40** | 40° | **CGO145/85** | 85° |
| **LGO115/60** | 60° | **CGO115/100** | 100° | **LGO145/60** | 60° | **CGO145/100** | 100° |
| **LGO115/120** | 120° | | | **LGO145/120** | 120° | | |

# LGO Specification

| | LDM115/XXX | CGO115/XXX | LDM145/XXX | CGO145/XXX |
|---|---|---|---|---|
| **Fan Angle** (°) | 15, 28, 40, 60 & 120 | 14, 60, 85 & 100 | 15, 28, 40, 60 & 120 | 14, 60, 85 & 100 |
| **Operational Wavelength** (nm) | 520 to 850 | 520 to 850 | 520 to 850 | 520 to 850 |
| **Typical Line Width at 1 metre** (mm) | 0.75 | <0.8 | 0.75 | <0.8 |
| **Length** (mm) | 24 | 24 | 26 | 26 |
| **Diameter** (mm) | 17 | 17 | 22 | 22 |
| **Mass** (kg) | 8 | 8 | 16.5 | 16.5 |
| **Length with relevant LDM** (mm) | 51 | 51 | 60 | 60 |
| **Diameter with relevant LDM** (mm) | 17 | 17 | 22 | 22 |
| **Mass with relevant LDM** (kg) | 17.5 | 17.5 | 39 | 39 |

# LGO115 & LGO145
## Line & Cross Generator Optics

# Fan Angle Calculator

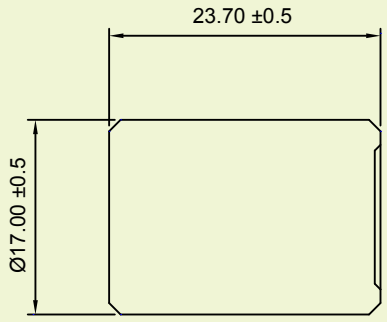



Line Length x = 2ytan(φ/2)

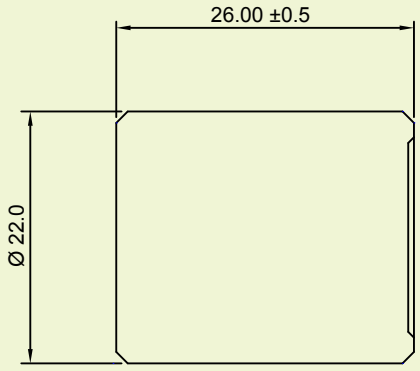
φ = fan angle
y = distance from lens

# Diagram

## LGO115




## LGO145




Please Note: Global Laser reserve the right to change descriptions and specifications without notice.

T: +44 (0)1495 212213
F:+44 (0)1495 214004
E: sales@globallasertech.com
www.globallasertech.com

Global Laser Ltd
Units 9-10
Roseheyworth Business Park
Abertillery. Gwent NP13 1SP UK

ISO9001 Certified

9090-02-061 Rev 3 19/11/2018