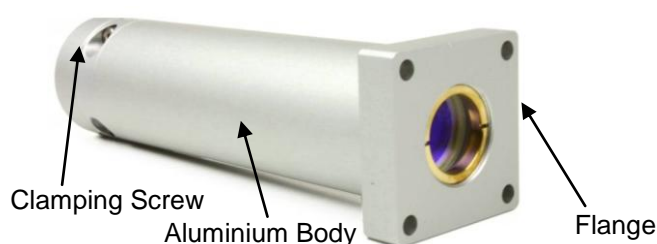




## Accessories Datasheet

### Beam Output Collimators

We offer a range of collimators for use with G4 Pulsed Fiber Lasers compatible with selected variants. These are used to collimate the divergent beam output from G4 lasers fitted with either ILLK or ILOC+ beam delivery optics and provide a range of fixed beam diameters that match industry standard scanner apertures. Collimators are available with a flange interface that serves as an accurate opto-mechanical datum or in a flangeless (cylindrical) form where a clamping arrangement is preferred.



**Cylindrical collimator**



### Collimator Options

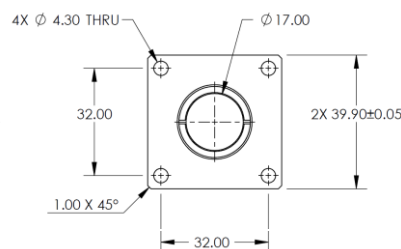
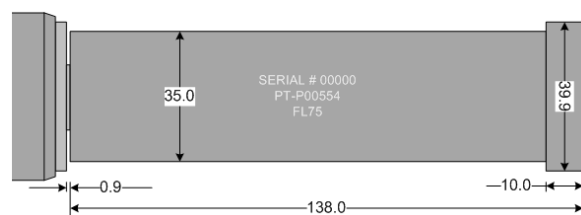
				F30	F50	F75	F100
Typical beam diameter, mm +/- 20%				3.0	5.0	7.5	10.0
Output Divergence (mrad) typ. ± 20%	$M^2 \leq 1.3$	"S" Type		0.73	0.44	0.29	0.22
	$M^2 \leq 1.6$	"Z" Type		0.90	0.54	0.36	0.27
	$1.6 \leq M^2 \leq 2.0$	"L" Type		1.13	0.68	0.45	0.34
	$2.5 \leq M^2 \leq 3.5$	"H" Type		1.97	1.18	0.79	0.59
Pointing Error (mrad)				≤ 6.0	≤ 3.6	≤ 2.4	≤ 1.8

Design wavelength = 1064nm

### Mechanical Outline

	F30	F50	F75	F100
Collimator length (mm)	95.2	112.0	138.0	167.5
Cylindrical clamp region diameter (mm)	35.0 (+0.00, -0.05)			

The collimators are intended to be fixed in the user's equipment using either the cylindrical D35 (industry standard) mechanical interface or the screw holes on the flanged version. A G4 fitted with ILLK or ILOC+ beam delivery optic can then be plugged into the collimator. There are clamping screws to firmly hold the beam delivery optic in position.



### Optical Specification

Parameter	Value*
Maximum Input divergence (1/e <sup>2</sup> full angle)	Max 120 mrad (matched to G4 specification)
Beam offset	≤ diameter / 10
Transmission	>95% @ 1064nm, > 50% @ 650nm

\* When using flange front face as a design reference plane.

### Environmental Conditions







	Operating	Storage
Temperature	0 to 50°C	-10 to 60°C
Humidity (non-condensing)	5-95% RH	0-95%RH

### Accessory Ordering

	Description	Flanged Part #	Cylindrical Part #
These collimators can be ordered as accessories for any of the G4 product family fitted with either ILLK or ILOC+ without any need for factory reconfiguration.	F30	PT-P00577	PT-P00614
	F50	PT-P00553	PT-P00615
	F75	PT-P00554	PT-P00616
	F100	PT-P00555	PT-P00617



## Cables, Break-Out Board & Other Accessories

Type	Part no.	Description
<b>Standard I/O Control Cable (1.0 m)</b> 	<b>PT-E01261</b>	<p>This is a 1m 68-way SCSI III male to male screened cable with M2.5 screw locks. This cable is used to provide connectivity for RS-232 communications, hardware control and fault reporting. This is available as a replacement part. G4 lasers ship with these cables as standard.</p>
<b>Standard 24VDC Power Supply Cable (1.0 m)</b> 	<b>PT-E01590</b>	<p>For use with G4 products that require 24VDC. The cable has a connector for attachment to a G4 pulsed Fiber Laser module (1.0 m length). Two pairs of conductors allow easy connection to the diode and logic power supplies. This is available as a replacement part. G4 lasers that require 24VDC ship with these cables as standard.</p>
<b>Standard 36VDC Power Supply Cable (1.0 m)</b> 	<b>PT-E02469</b>	<p>For use with G4 products that require 36VDC. Length: 1m. This is available as a replacement part. G4 lasers that require 36VDC ship with these cables as standard.</p>
<b>Screened 24VDC Power Supply Cable (1.0m)</b> 	<b>PT-E01651</b>	<p>For use with G4 products that require 24VDC and compliance to the tighter radiated immunity requirements of BS61000-6-2:2007 for industrial environments. Without this cable G4 meets EN61000-6-1:2007 immunity standard for light industrial requirements (1.0 m length).</p>
<b>G4 Break-Out Board</b> 	<b>PT-E01628</b>	<p>This part allows the user to directly and separately access the individual interfaces implemented via the 68 way SCSI cable. Use with the IO control or 9-way RS232 cables. Note: no serial cables provided.</p>
<b>9-way to 9-way RS232 cable for G4 Break-Out Board</b> 	<b>PT-E00746</b>	<p>For use with the 9-way interface connector on the G4 Break-Out Board PT-E01628 (2.5 meter length, male to female). This cable is used to provide connectivity for RS-232 communications (no hardware control lines).</p>



**Ferrites**



**PT-K00123**

For use with G4 SCSI and power cables to meet the tighter emissions requirements of BS61000-6-3:2007 for residential, commercial and light industrial environment (without these G4 lasers meet EN61000-6-4:2007 emissions standard for industrial requirements).

**Protective Gaiter**



**PT-M03592**

To provide a seal between ILLK and BEC (Shown with ILLK and Flanged collimator).

**Flanged ILOC  
adapter**



**PT-M05197**

This part allows the user to connect the cylindrical output from the ILOC beam delivery to a flanged interface.

**300W  
Power Supply Unit  
(24 VDC)**



**PT-E02368**

300W (100-240VAC, 50-60Hz to 24VDC) single-phase mains power supply unit for use with G4 lasers up to 50W average power.

**600W  
Power Supply Unit  
(24 VDC)**



**PT-E02369**

600W (100-240VAC, 50-60Hz to 24VDC) single-phase mains power supply unit for use with G4 lasers with average power in the range of 70W-100W average power.

**1000W  
Power Supply Unit  
(36V DC)**



**PT-E02484**

1000W (100-240VAC, 50-60Hz to 36VDC) single-phase mains power supply unit for use with G4 lasers with average power in the range of 130W-200W average power.