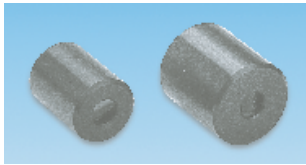


## Line Generator Optics



	Miniature	Compact
Length	24	26
Diameter	17.5	22
Length with LDM	51	60
Diameter with LDM	17.5	22

The compact and miniature series of Line Generator Optics (LGO) have been designed specifically for use with the corresponding ranges of Laser Diode Modules (LDM), see above. Simple to mount and adjust on a pre-focused LDM, these units emit a highly defined thin line of laser light. Applications include edge detection, scanning systems, medical and industrial alignment system and process control.

Laser light emitted at a fan angle of 40°.

Approximate line length and thickness with distance:

5cm: 35mm 1mm, 30cm: 220mm 1.5mm, 90cm: 650mm 1.5mm

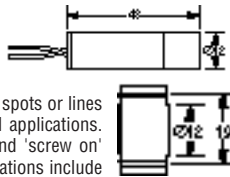
OPT365

	Order Code	1+	3+	5+
Miniature LGO	<b>623-258</b>			
Compact LGO	<b>623-260</b>			

## Self-Contained



## MELLES GRIOT



This range of high quality, user focusable diode lasers with integral drive electronics offers reliability at an affordable price. The 635nm modules emit very bright spots or lines and are particularly suited to high ambient light level applications. Options include an easy to install flanged housing, and 'screw on' line generating optics for use with any module. Applications include alignment, positioning, security and machine vision.

Wavelengths:	635nm, 670nm, 780nm
Output powers:	<1mW, (Class 2), 3mW, 5mW (Class 3a) with exception of 780nm and 635nm,
12mW modules (Class 3b)	
Housings:	12mm cylindrical or flanged 43mm
Beam size (nom):	2mm 4mm
Beam divergence:	<0.5 mrad
Pointing stability:	<0.5mrad/deg C
Supply voltage:	3 to 6V dc
Current drain (typ):	<70mA
Output power stabilisation:	<5%
	Reverse polarity protected
Operating temperature:	-10°C to +40°C (except 670nm 3mW -10°C to +60°C)

WARNING: These devices are laser diode modules and conform to BS (EN) 60825 emission criteria. Do not look directly into the laser beam. Eye protection should be worn as blink response is not sufficient to protect the human eye.

<1mW visible - class II, 3mW & 5mW visible - class IIIa, 12mW - class IIIb.

OPT578

Module Type	Housing	Order Code	1+	5+	10+
635nm, 1mw	Cylindrical	<b>140-910</b>			
635nm, 1mw	Flanged	<b>140-922</b>			
635nm, 3mw	Cylindrical	<b>140-934</b>			
635nm, 3mw	Flanged	<b>140-946</b>			
635nm, 5mw	Cylindrical	<b>140-958</b>			
635nm, 5mw	Flanged	<b>140-995</b>			
635nm, 12mw	Flanged	<b>141-008</b>			
670nm, 3mw	Cylindrical	<b>141-010</b>			
670nm, 3mw	Flanged	<b>141-021</b>			
670nm, 3mw, -10°C to +60°C Op. Temp.	Cylindrical	<b>141-033</b>			
670nm, 3mw, -10°C to +60°C Op. Temp.	Flanged	<b>141-045</b>			
780nm, 3mW	Cylindrical	<b>141-057</b>			
780nm, 3mW	Flanged	<b>141-069</b>			
Line Generator	12° Fan	<b>141-070</b>			
Line Generator	22° Fan	<b>141-082</b>			

## Fibre Optics – Discrete Devices

### 'Sweet Spot'™ Emitters and Detectors

## Honeywell



H = 3.8, Dia = 5.4  
Pins on 2.54 PCD



Pin View

Ident. Cap	1	Connections	
		2	3
HFD3029-002	Clear	V <sub>CC</sub>	Data out
HFD3022-002	Blue	A	K/case
HFE4020-313	Clear	A	K Gnd/Case

TO-18 style components with on-chip microlens for optimum power coupling to optical fibres.

**HFE4020-313** High radiance emitter. Typical power output 60µW at 50mA, seen at the end of a 10m length of 50µm core fibre. Suitable for single fibre 50µm dia and larger. Peak response = 850nm, Typical response time = 8ns.

**HFD3022-002** PIN photodiode detector. High sensitivity and fast response for use up to 50MHz. Peak response = 875nm, t<sub>r</sub> = 15ns typ.

**HFD3029-002** Schmitt trigger detector with photodiode, preamp, voltage regulator and output buffer. Supply voltage range = 4.5 - 16V, Data rate = DC to 200 Kbits/s, Peak response = 800nm, t<sub>r</sub> = 60ns, t<sub>f</sub> = 6ns (typ)

OPT147

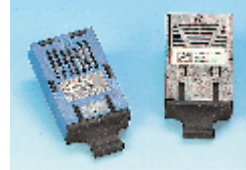
Mfrs. List No.	Order Code	1+	10+	50+
HFE4020-313	<b>.620-026</b>			
HFD3022-002	<b>.327-736</b>			
HFD3029-002	<b>.327-748</b>			

## Fibre Optics – Transceiver Modules & Chip Sets

### ATM OC3 & G/Bit Ethernet



**Agilent Technologies**  
Innovating the HF Way



This range of fibre optic products covers the needs of applications that are standards-based or general purpose. They offer greater bandwidth capability than wire links, such as twisted pair or coaxial cable, fibre links offer other benefits as well including isolation of current and voltage, it does not radiate, nor is it susceptible to, electromagnetic interference. In addition, fibre cable is not easily

tapped, providing secure communication and fibre link eliminates the problems associated with grounding. A fibre signal line may be placed next to noise sources such as motors or power lines without any interference problems because fibre does not generate electromagnetic radiation, it does not induce cross-talk.

Application	Data Rate	Distance	Pin Out	Mfrs. List No.	Cable Size
ATM OC3	155Mbps	2km	1 9	HFBR-5205	62.5µm
	155Mbps	15km	1 9	HFCT-5205B	9µm
G/Bit Ethernet	1.5Gb/s		N/A	HDMP-1024	
			N/A	HDMP-1022	

### HFBR-5103

FDDI/Fast Ethernet compliant, optical transceiver in a 1 9 pin package. Capable of 125MBd over 2km in a 62.5µm fibre.

### HFBR-5205

ATM, OC-3/STM-1 compliant transceiver in a 1 9 pin package. 155Mbps over 2km in a 62.5µm multimode fibre.

### HFCT-5205B

SONET OC-3/SDH STM-1 compliant, singlemode transceiver in a 1 9 pin package. Pin for pin compatible with multimode transceiver HFBR-5205. 155Mbps over 15km in a 9µm singlemode fibre.

### HDMP-1022

Low cost Gigabit transmitter IC with TTL I/O. 150-1500MBd serial data rate per proprietary point to point links over copper or optical fibre.

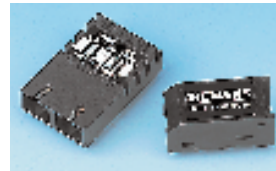
### HDMP-1024

Low cost Gigabit receiver IC with TTL I/O. 150-1500MBd serial data rate per proprietary point to point links.

OPT510

Mfrs. List No.	Order Code	1+	5+	10+
HFBR-5205	<b>942-730</b>			
HFCT-5205B	<b>140-065</b>			
HDMP-1022	<b>942-870</b>			
HDMP-1024	<b>942-881</b>			

## 155MBd, 622MBd Fibre Optic Transceivers



A range of transceiver modules that are fully compliant with all major existing standards. The V23809xxx series have industry standard footprints with a low profile package height of 9.8mm. The V23818-C8-V10 is a small form factor module which is half the width of the 'traditional' industry standard and occupies only 5cm<sup>2</sup> of PCB area compared with the normal 9.7cm<sup>2</sup>.

Standard	Data Rate	Pin Out	Fibre Type	Wavelength	Distance	Mfrs. List No.
ATM/FDDI/ Fast Ethernet	155MBd	1 x 9	Multimode	1300nm	2000m	V23809-C8-C10
ATM/FDDI/ Fast Ethernet	155/ 194MBd	1 x 9 Small Form Factor	Multimode	1300nm	2000m	V23818-C8-V10
ATM	622MBd	1 x 9	Single mode	1300nm	15km	V23826-H18-C63

OPT596

Mfrs List No.	Order Code	1+	5+	10+
V23809-C8-C10	<b>143-443</b>			
V23818-C8-V10	<b>143-467</b>			
V23826-H18-C63	<b>143-479</b>			