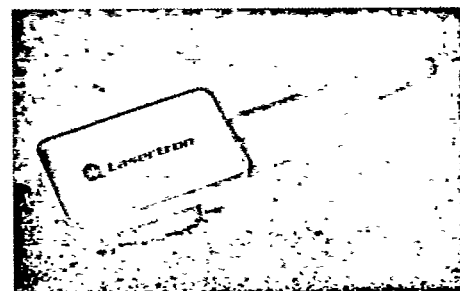


QDFF

High-Speed pinFET Receiver

- Telecom trunk and junction applications
- Gigabit components for telecom
- High-responsivity 1300/1550 nm InGaAs detector
- High-speed GaAs IC transimpedance preamplifier
- High-speed modulation and high gain
- Multimode fiber



Description

The QDFF pinFET receiver module is a high-bandwidth transimpedance pinFET module utilizing a GaAs IC preamplifier and an AR-coated low-noise InGaAs detector, packaged in an industry-standard 14-pin DIL package. The QDFF operates on a similar principle to the QDFM wide dynamic range pinFET module. Two versions are available, one at 1200 MHz, the other at 1800 MHz bandwidth.

Applications

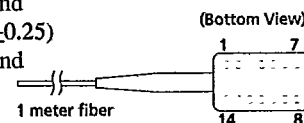
The module is designed for use in high-speed digital systems accommodating data rates up to 2.5 Gb/s.

Specifications

	QDFF-120-201			QDFF-200-201		
	Min	Typ	Max	Min	Typ	Max
Characteristics at 25°C						
Maximum optical input (dBm)			-2			-2
Effective transimpedance (Ω)	400	500			250	
Peak-peak output voltage at max. optical input (mV)		300			300	
Photodiode responsivity (A/W)	0.75	0.85		0.75	0.85	
Spectral response (nm)	1100		1600	1100		1600
pinFET bandwidth (MHz, -3 dB)	1200			1800		
Detector leakage current (nA)		5	20		5	20
Output impedance (Ohms)		50			50	
Operating temperature range (°C)	0		60	0		60
Storage temperature range (°C)	-40		85	-40		85

Pin Connections

- 1 Detector bias ($-5\text{ V} \pm 0.25$)
- 2 AC Ground
- 3 Case Ground
- 4 V_{cc} ($-5\text{ V} \pm 0.25$)
- 5 Case Ground
- 6 Ground
- 7 NC
- 8 Case Ground
- 9 NC
- 10 V_{cc} ($+5\text{ V} \pm 0.25$)
- 11 Ground
- 12 Output
- 13 Ground or NC
- 14 Ground



Ordering Information

Base Model	Suffix			
	No Connector	FC/PC	Biconic	ST
QDFF-120	-201	-250	-251	-252
QDFF-200	-201	-250	-251	-252

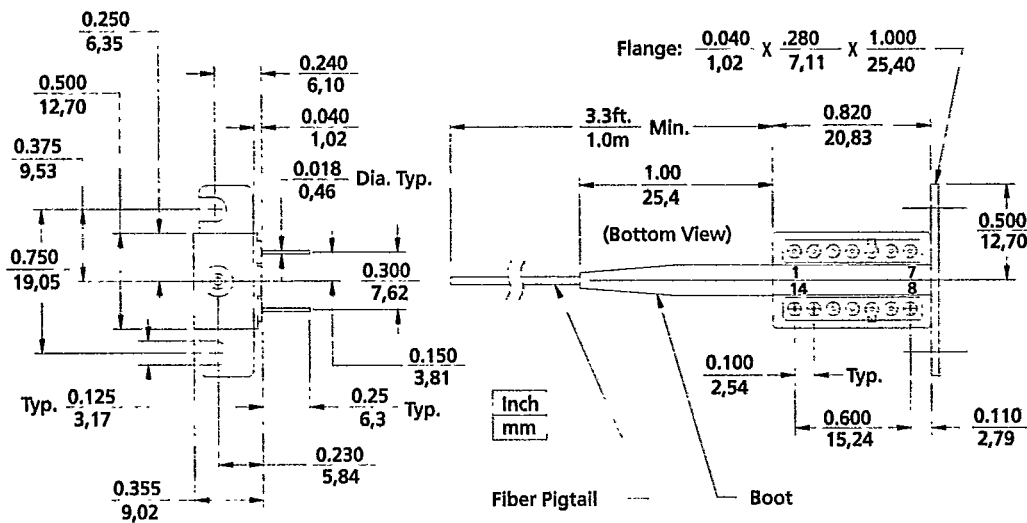
Package Specifications

T-91-20

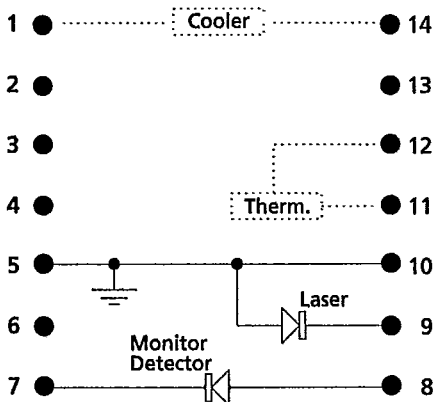
Lasertron uses a variety of industry-standard packages to house its products. The dimensions indicated here are common to all like packages; however, pin connections may differ between product families. Product-specific pin connections are provided in the individual data sheets in the Product Information section of this Product Guide.

Source Packages

14-pin DIL "Longhorn" (Lasers, LEDs)



LONGHORN SCHEMATIC

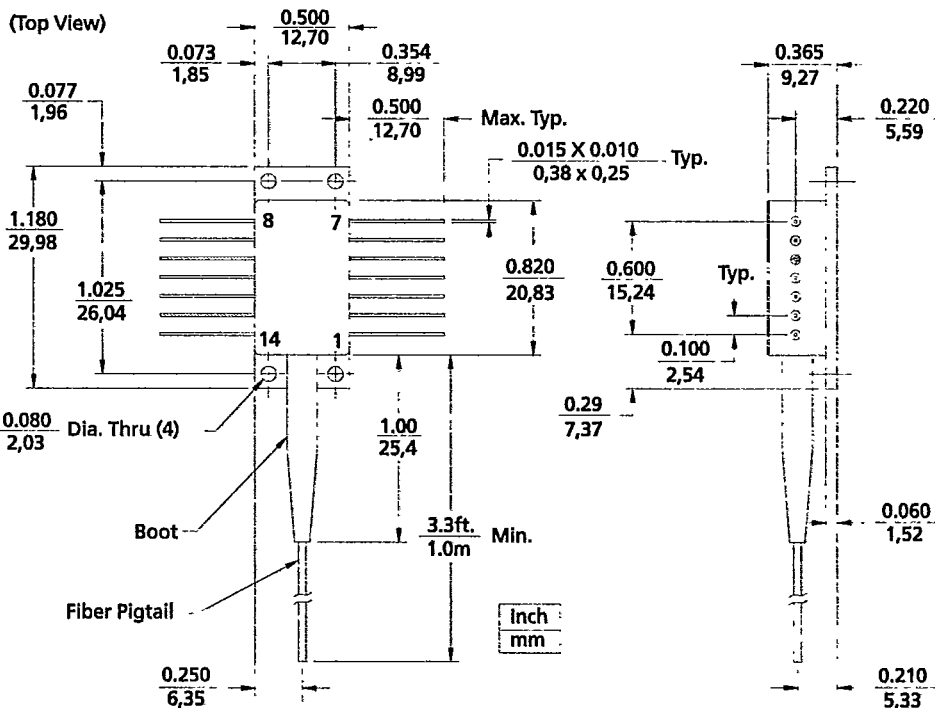
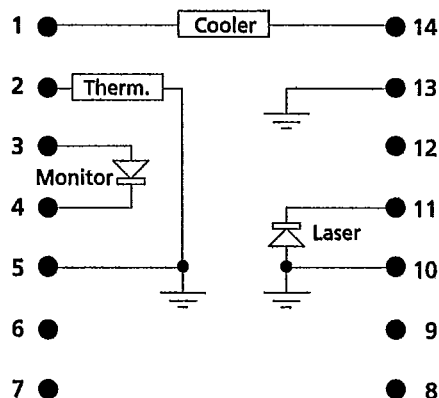


Note: Cooler and thermistor are not included in all modules.

Source Packages (continued)

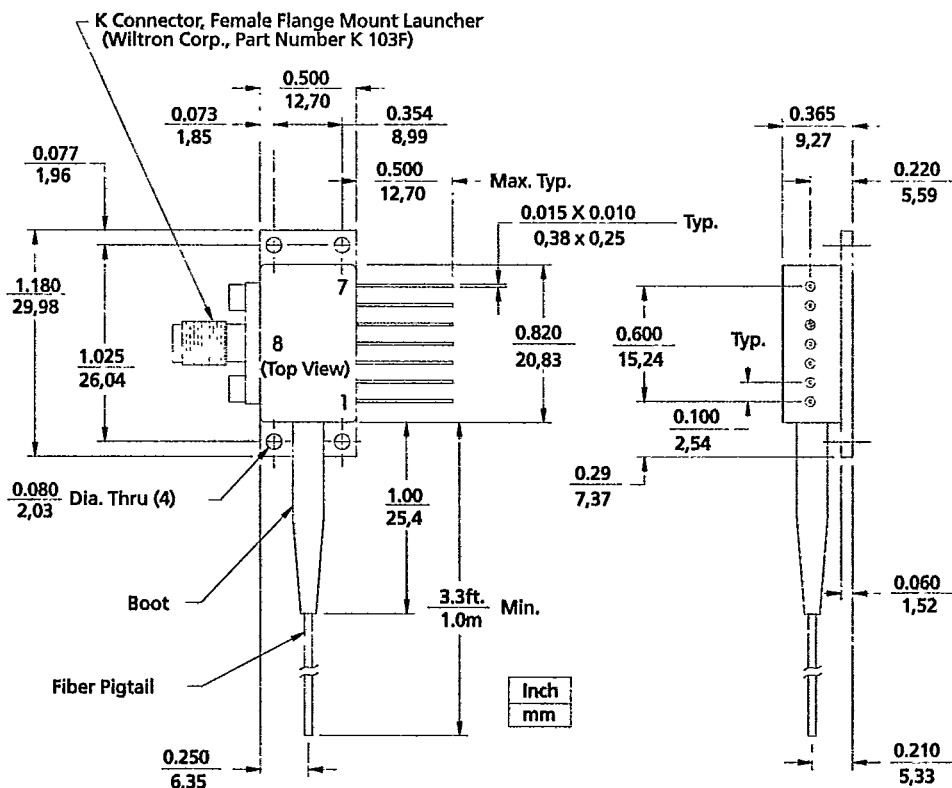
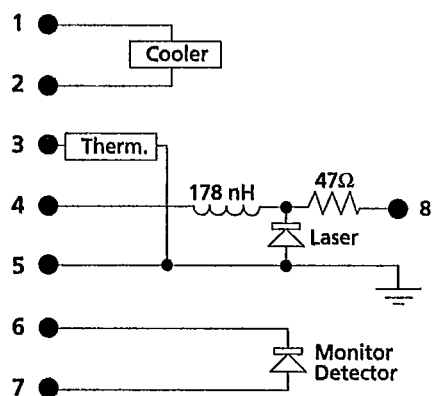
14-pin "Butterfly"

BUTTERFLY SCHEMATIC



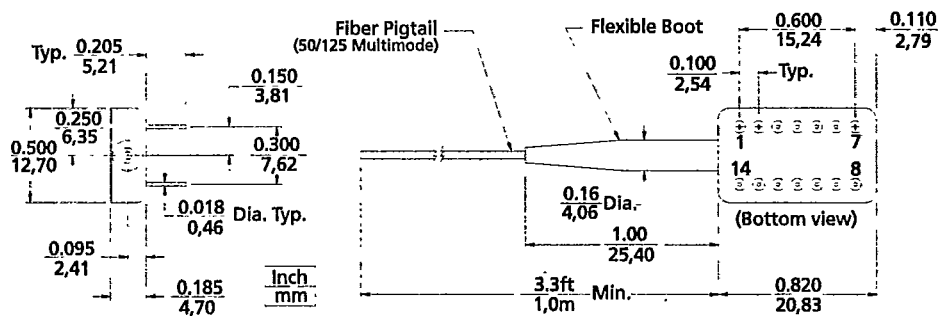
Microwave Laser

MICROWAVE LASER SCHEMATIC

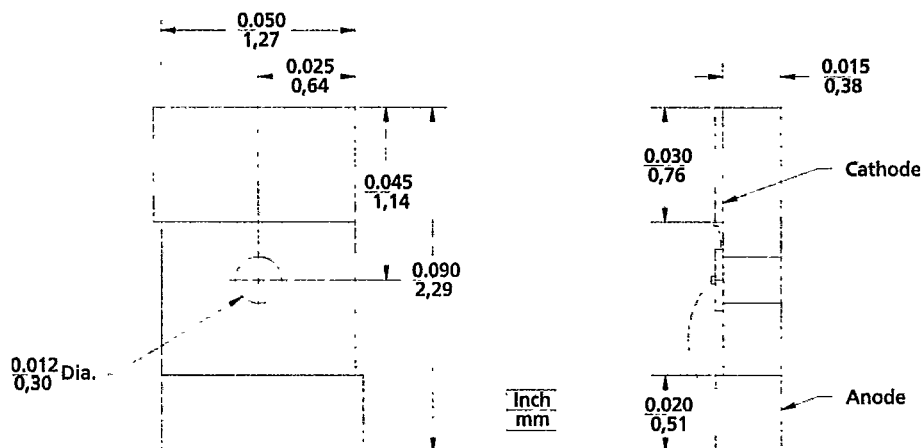


Detector Packages

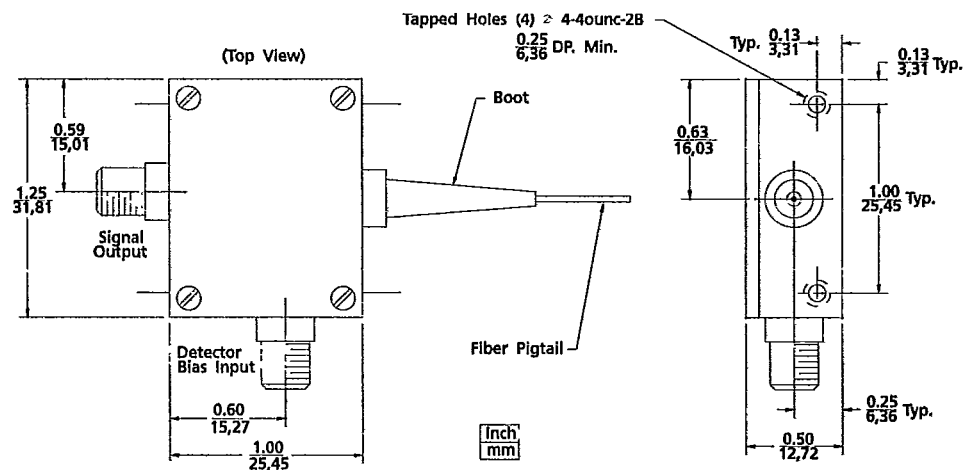
14-pin DIL PIN/pinFET

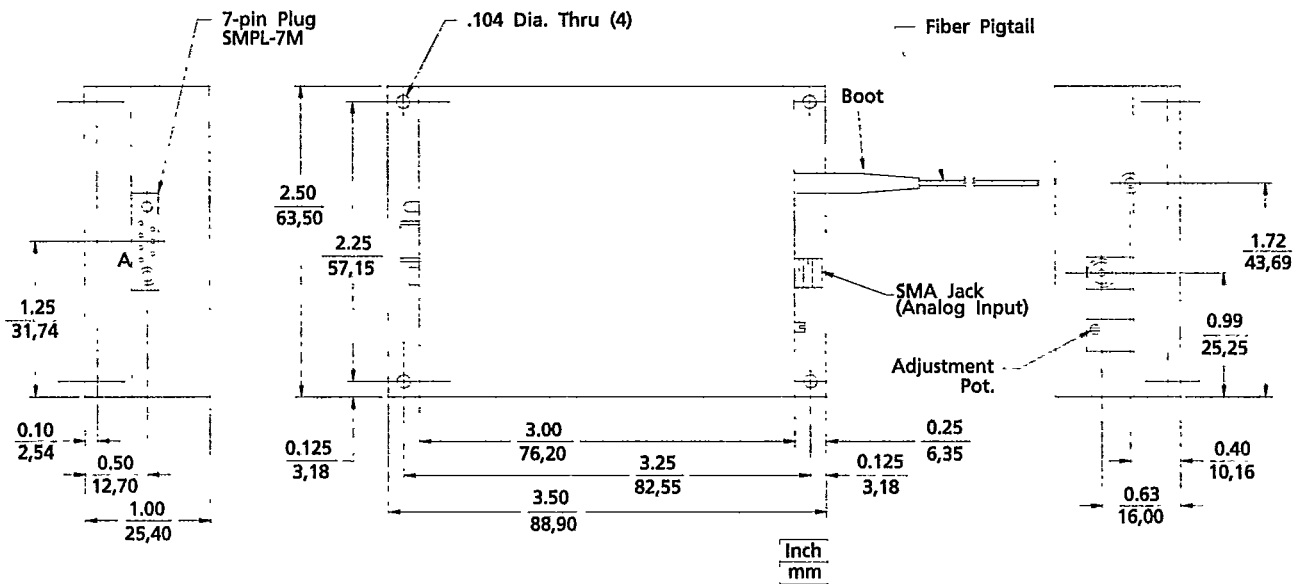


QDE035, QDE075



QDEMW1, QDEMW3 Microwave Detector



QTX Transmitter**QLXSMW Microwave Transmitter**