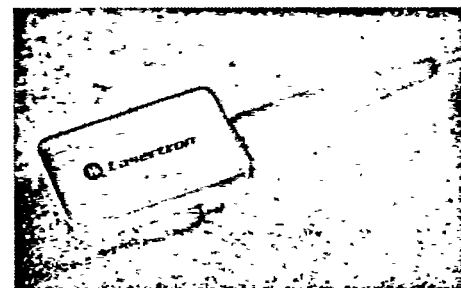


**QDFB****Wide Dynamic Range  
pinFET Receiver***T-41-50*

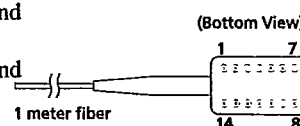
- Telecom access and junction applications
- Variable transimpedance configuration
- Hybrid construction
- Industry-standard 14-pin DIL package
- Multimode fiber

**Description**

The QDFB pinFET module is a high-sensitivity module with exceptional dynamic range performance. It operates in systems with data rates up to 18 Mb/s. The QDFB offers sensitivity performance equivalent to the QDFT version, but with a dynamic range of at least 40 dB. Packaged in the industry-standard, low-profile, 14-pin DIL package, the hermetic module is pigtailed with multimode fiber. Pigtail is available terminated with optional FC/PC, Biconic or ST connector.

**Pin Connections**

- 1 -5 V
- 2 Ground
- 3 Case Ground
- 4 -5 V
- 5 Case Ground
- 6 Ground
- 7 Output
- 8 Case Ground
- 9 NC
- 10 +5 V
- 11 Ground
- 12 NC
- 13 Ground
- 14 Ground

**Specifications**

|                                                | Min   | Max   |
|------------------------------------------------|-------|-------|
| Operating temperature (°C)                     | -20   | 70    |
| Storage temperature (°C)                       | -40   | 85    |
| Sensitivity at 25°C (dBm)                      | -52   |       |
| Sensitivity over operating temperature (dBm)   | -50   |       |
| Overload power (dBm)                           |       | -5    |
| Peak-peak output voltage at overload power (V) |       | 1     |
| pinFET bandwidth (MHz)                         | 10    |       |
| Noise filter testing bandwidth (MHz)           | 8.5   |       |
| Detector responsivity (A/W)                    | 0.75  |       |
| Module transfer characteristic (kV/W)          | 250   |       |
| Output impedance (Ohms)                        |       | 50    |
| Positive supply requirement (V)                | 4.75  | 5.25  |
| Negative supply requirement (V)                | -4.75 | -5.25 |
| Power consumption (mW)                         |       | 250   |

**Absolute Maximum Ratings**

|                                 |     |
|---------------------------------|-----|
| Fiber coupled power (mW)        | 5   |
| Reverse photocurrent (mA)       | 5   |
| Reverse bias voltage (V)        | 15  |
| Forward current (mA)            | 2   |
| Lead soldering temperature (°C) | 260 |
| Lead soldering duration (sec)   | 10  |
| Fiber yield strength (N, min)   | 10  |
| Fiber bend radius (mm, min)     | 35  |

**Ordering Information**

|            | Suffix       |       |         |      |
|------------|--------------|-------|---------|------|
| Base Model | No Connector | FC/PC | Biconic | ST   |
| QDFB-010   | -001         | -050  | -051    | -052 |

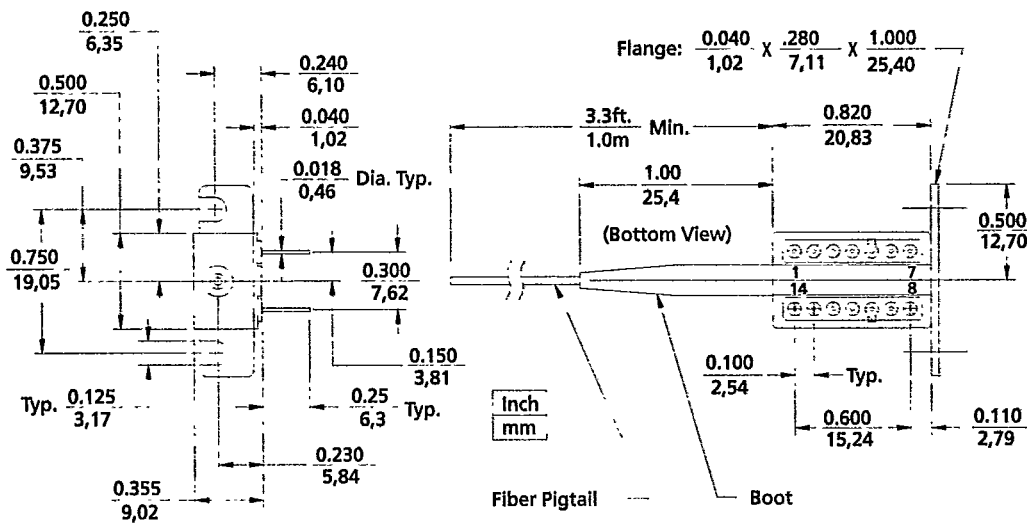
# Package Specifications

T-91-20

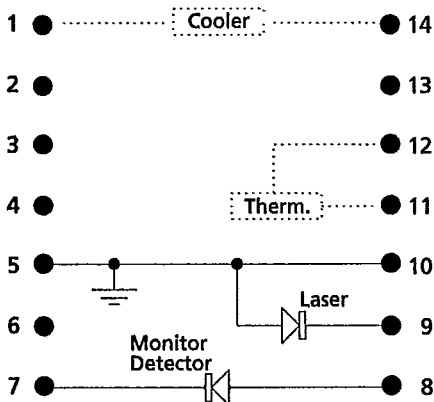
Lasertron uses a variety of industry-standard packages to house its products. The dimensions indicated here are common to all like packages; however, pin connections may differ between product families. Product-specific pin connections are provided in the individual data sheets in the Product Information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

## Source Packages

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



#### LONGHORN SCHEMATIC

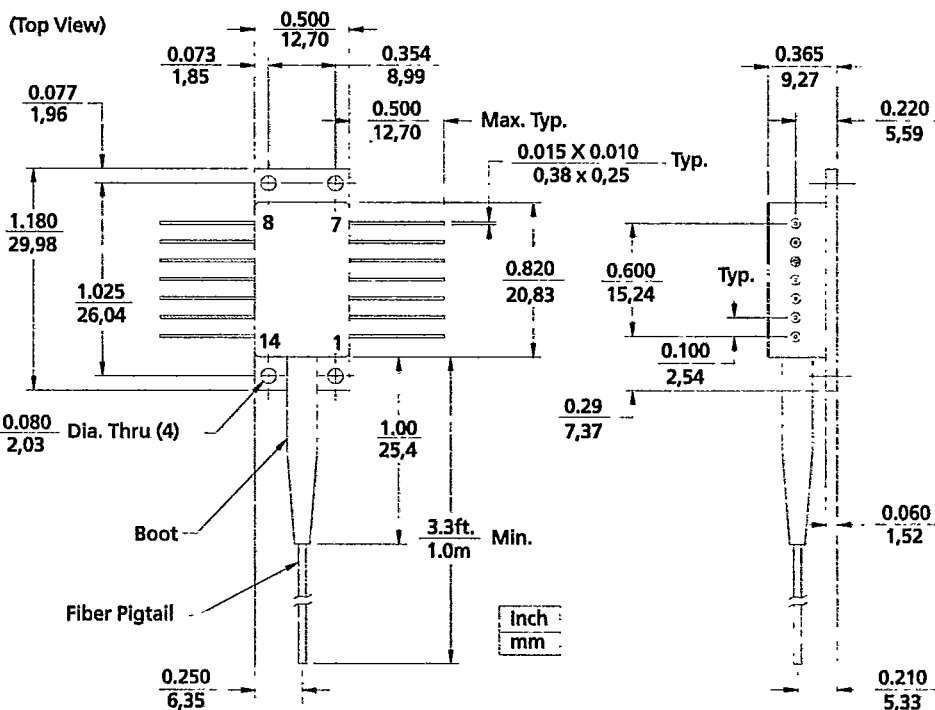
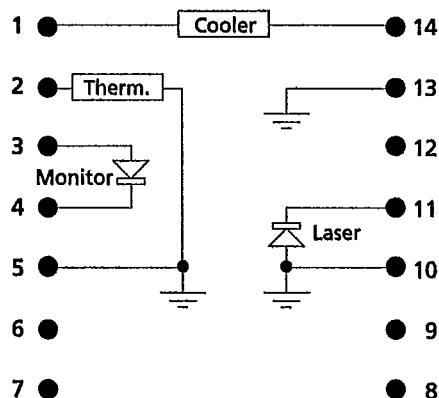


**Note:** Cooler and thermistor are not included in all modules.

# Source Packages (continued)

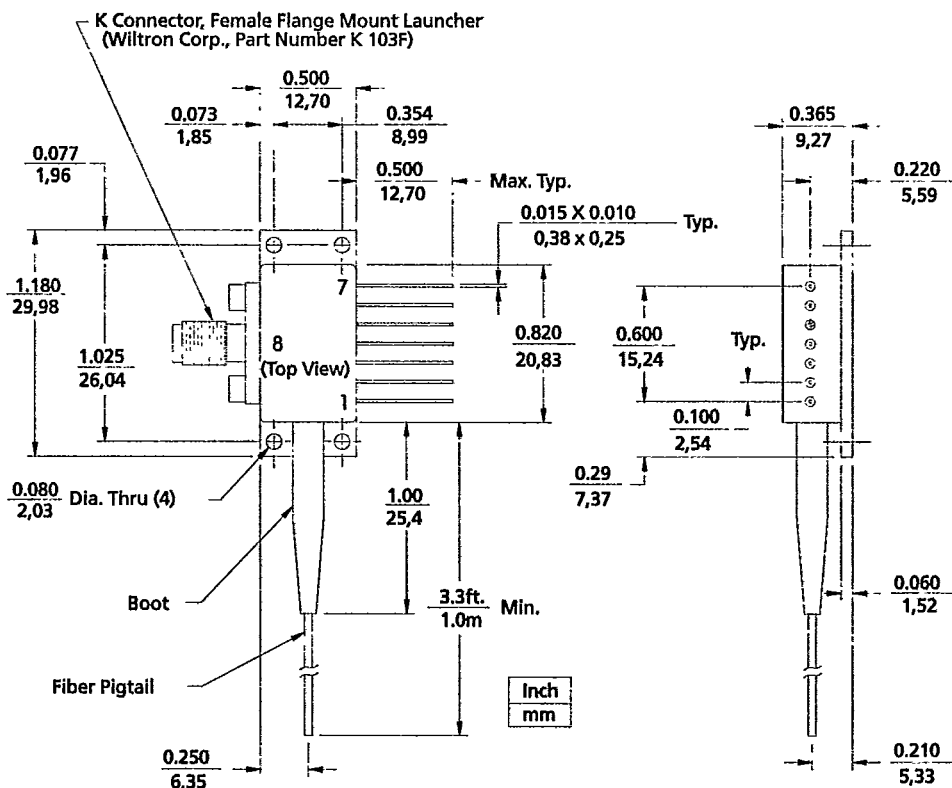
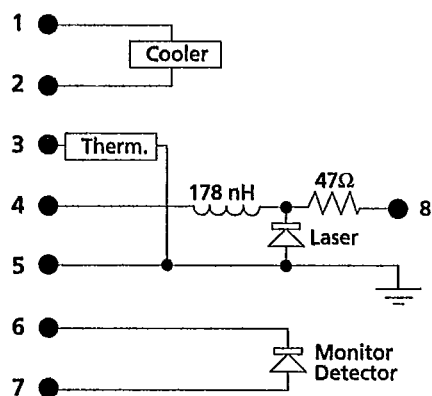
## 14-pin "Butterfly"

BUTTERFLY SCHEMATIC



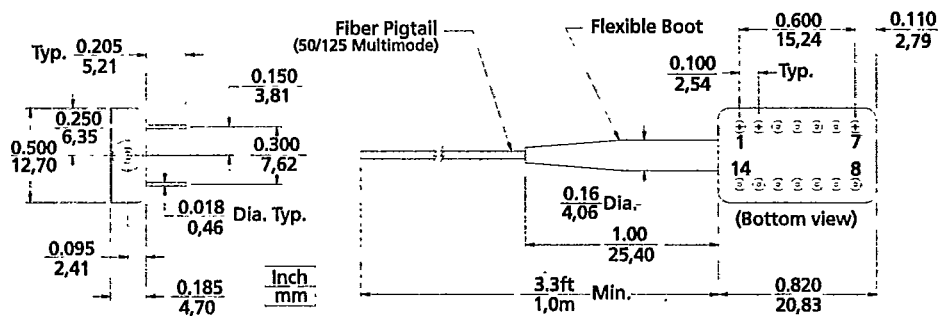
## Microwave Laser

MICROWAVE LASER SCHEMATIC

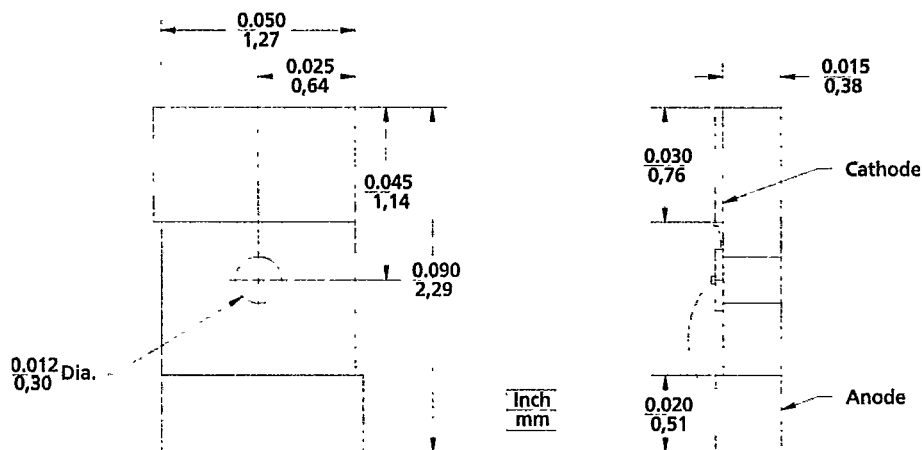


## Detector Packages

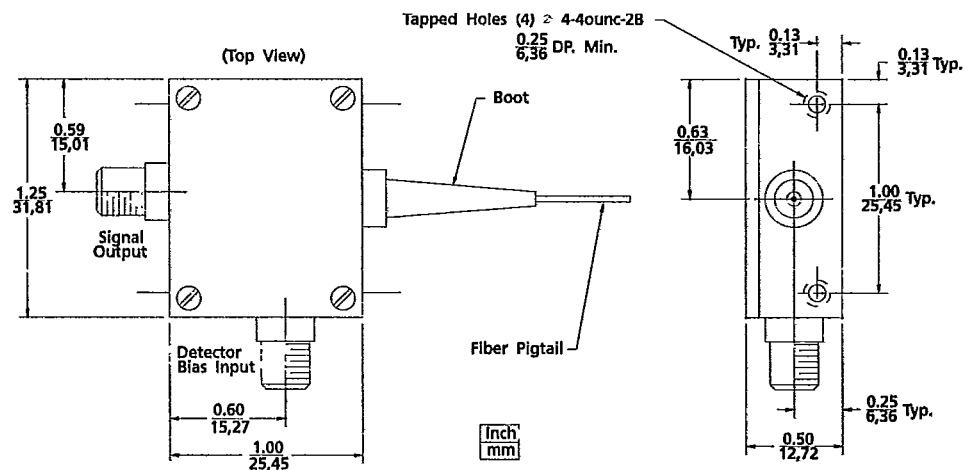
### 14-pin DIL PIN/pinFET

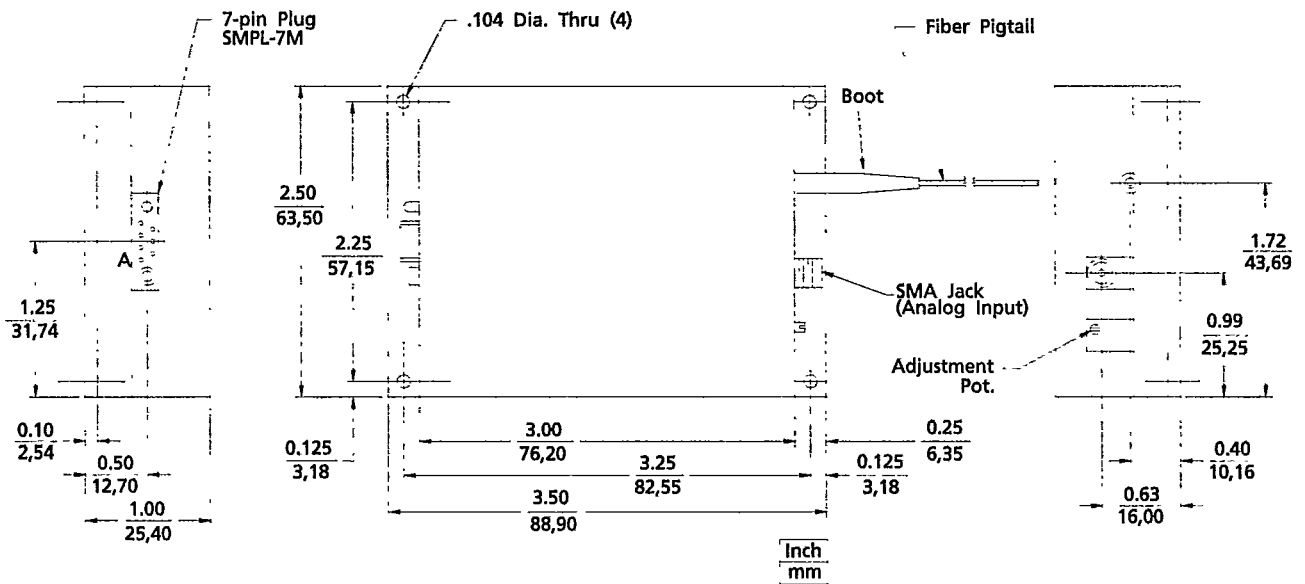


### QDE035, QDE075



### QDEMW1, QDEMW3 Microwave Detector



**QTX Transmitter****QLXSMW Microwave Transmitter**