

# DIAMOND

## Fiber Optic Components

### ACTIVE MODULES

#### DESCRIPTION

Laser and LED transmitter modules (MAT) as well as photodiode receiver modules (MAR) suitable for use in the first and second window.

The E-2000™ is an innovative connector system developed by Diamond with several unique features tailored to the emerging multiple-services environment. It is the first connector system to incorporate automatic eye-safety features, built-in protective covers, and a flexible, user-definable color-coding and mechanical-keying system. Since its introduction in 1993, it has attained a remarkable degree of worldwide market acceptance.

MAT active device transmitter modules permit the direct coupling of optical signals into fibers terminated with E-2000™ connectors. MAR receivers perform the reverse receiving function.

Both types are carefully designed to offer a high degree of optical stability over widely-varying environmental and mechanical-stress conditions. Rugged construction ensures stable, repeatable operation over  $\geq 1000$  mate/demate cycles.

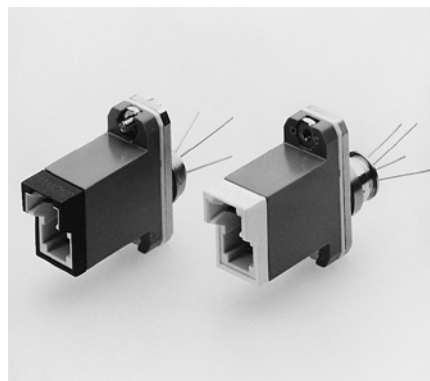
MAT and MAR active device modules incorporate the same features which have made the E-2000™ the connector of choice in a growing number of demanding applications, namely...

- ▶ a positive latching mechanism
- ▶ spring-loaded shutters for eye-safety
- ▶ guiding tracks to cleanly guide the connector ferrule into the sleeve
- ▶ a compact footprint

The connector interface is designed in accordance with the established EN-LSH standards (EN 86 275-001 and 86 275-002).

### E-2000™ MAT / MAR

SINGLE MODE PC/APC  
MULTIMODE PC



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*Specifications subject to change  
without notice*

BDD 1950087 015

GENERAL SPECIFICATIONS

MAT E-2000™ LD SOURCE

|   | SINGLE MODE 8° APC | SINGLE MODE 0° PC | 50/125µm MULTIMODE | UNITS |
|---|--------------------|-------------------|--------------------|-------|
| Approx. maximum launch efficiency <sup>1)</sup> | 7                  | 8                 | 25                 | %     |
| Reflectance (RL)                                | ≤-55               | NA                | NA                 | dB    |
| Repeatability                                   | ≤0.2               | ≤0.2              | ≤0.2               | dB    |
| Service life                                    | ≥1000 matings      |                   |                    |       |
| Operating temperature*                          | -30 to +85         |                   |                    | °C    |
| Storage temperature*                            | -30 to +85         |                   |                    | °C    |

<sup>1)</sup> this values are fiber and λ dipendent

MAT E-2000™ LED

|                        | SINGLE MODE 0° PC | 50/125µm MULTIMODE | UNITS |
|------------------------|-------------------|--------------------|-------|
| Repeatability          | ≤0.2              | ≤0.2               | dB    |
| Service life           | ≥1000 matings     |                    |       |
| Operating temperature* | -30 to +85        |                    | °C    |
| Storage temperature*   | -30 to +85        |                    | °C    |

MAR E-2000™ HIGH PERFORMANCE

|                        | SINGLE MODE 8° APC | SINGLE MODE 0° PC | 50/125µm MULTIMODE | UNITS |
|------------------------|--------------------|-------------------|--------------------|-------|
| Repeatability          | ≤0.5               | ≤0.5              | ≤0.5               | dB    |
| Service life           | ≥1000 matings      |                   |                    |       |
| Operating temperature* | -30 to +85         |                   |                    | °C    |
| Storage temperature*   | -30 to +85         |                   |                    | °C    |

\* May be further limited by diode specifications

**NOTE** For customized solutions, Order Numbers, body/frame colors, or more detailed information about performance, Pin-Out design, etc. please consult the "Table of available products" and the "Order Form" reported within our web catalogue in the E-2000™ MAT MAR product section.

Construction for LD source transmitters  
(3 axis alignment)

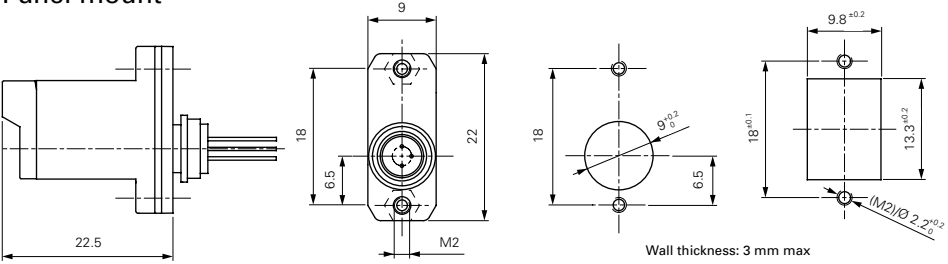
lens  
precision jewel ferrule stop  
interchangeable color-code or mechanically-keyed frame  
Zr O<sub>2</sub> split sleeve

Construction for LED source transmitters and receivers (2 axis alignment)

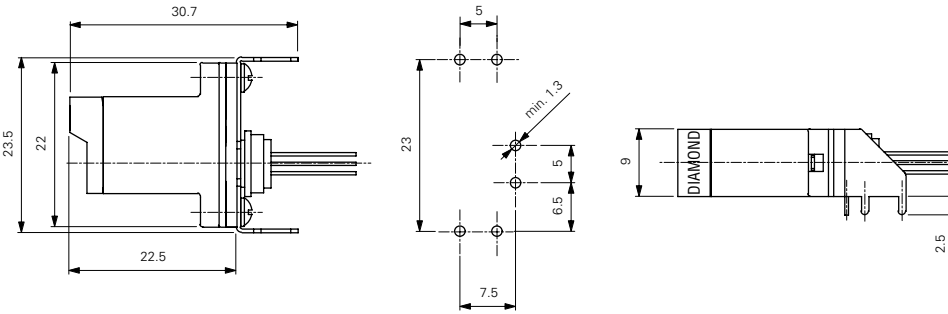
rigid sleeve  
Zr O<sub>2</sub> for 1300 nm types  
metal for 780 nm types

MECHANICAL DIMENSIONS

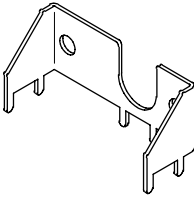
Panel mount



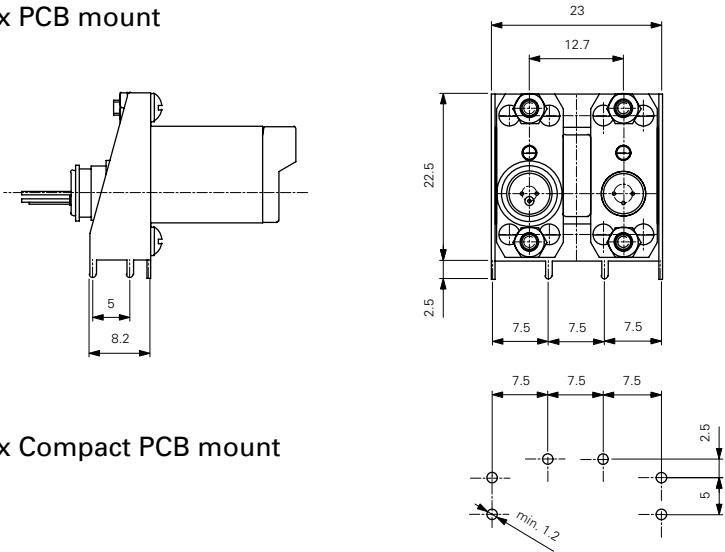
PCB mount



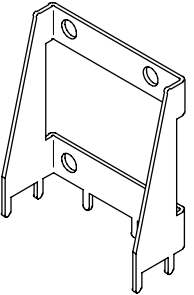
PCB mounting clip



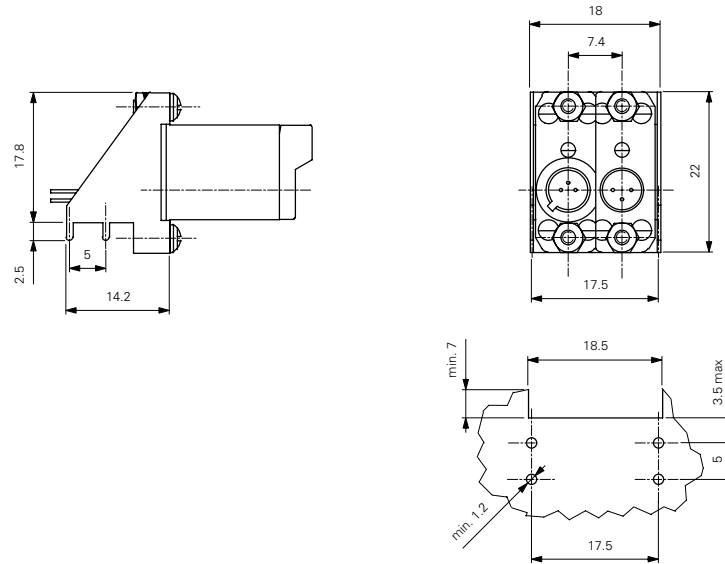
Duplex PCB mount



PCB duplex mounting clip



Duplex Compact PCB mount



PCB duplex compact mounting clip

