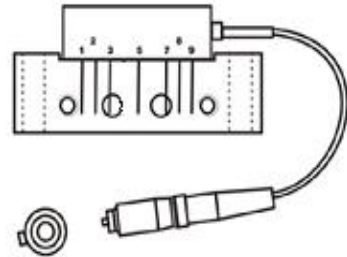


### FEATURES

- Excellent Linearity
- High Optical Input Power Range
- Excellent Flatness
- Optimal Reliability
- Low Noise
- Outline Standarding
- High reliability
- FC/APC SC/APC



### DESCRIPTION

The SMO8346 has an FC/APC or SC/APC connector. The amplifier supply voltage pin is connected to 6V(DC) . The modules have a mono mode optical input suitable for 1290 to 1600nm wavelengths a terminal to monitor the photo diode current and an electrical output having a characteristic impedance of 75Ω.

| Pin     | Description     |
|---------|-----------------|
| 1       | Monitor current |
| 5       | +V <sub>B</sub> |
| 9       | Output          |
| 2、3、7、8 | GND             |

### QUICK REFERENCE DATA

| SYMBOL           | PARAMETER                     | CONDITIONS         | MIN | MAX | UNITS |
|------------------|-------------------------------|--------------------|-----|-----|-------|
| f                | Frequency range               |                    | 40  | 870 | MHz   |
| S <sub>22</sub>  | Output return losses          | f=40 to 870 MHz    | -10 | -   | dB    |
|                  | Optical input return losses   |                    | 45  | -   | dB    |
| I <sub>tot</sub> | Total current consumption(DC) | V <sub>B</sub> =6V | 340 | 420 | mA    |

### HANDLING

Fiberglass optical coupling: maximum tensile strength=5N;minimum bending radius=35mm

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### LIMITING VALUES

In accordance with the Absolute Maximum Rating System

| SYMBOL           | PARAMETER                           | CONDITION                            | MIN. | MAX. | UNITS |
|------------------|-------------------------------------|--------------------------------------|------|------|-------|
| P <sub>in</sub>  | Optical input power                 | continuous                           | -    | 3    | mW    |
| T <sub>stg</sub> | Storage temperature                 |                                      | -40  | +85  | °C    |
| T <sub>mb</sub>  | Operating mounting base temperature |                                      | -20  | +85  | °C    |
| ESD              | ESD sensitivity                     | Human body model;<br>R=1.5KΩ;C=100pF | 500  | -    | V     |

### CHARACTERISTICS

(Bandwidth 40 to 870MHz; T<sub>mb</sub>=25°C, V<sub>B</sub>=6V, Z<sub>S</sub>=Z<sub>L</sub>=75Ω)

| SYMBOL           | PARAMETER                         | UNIT | MIN. | TYP. | MAX.  | CONDITIONS   |
|------------------|-----------------------------------|------|------|------|-------|--|
| S                | Responsivity                      | V/W  | 850  | -    | -     | λ=1300nm   |
| FL               | Flatness straight line            | dB   | -    | -    | ±0.75 | f=40 to 870 MHz  |
| V <sub>o</sub>   | Output voltage                    | dBμV | -    | 100  | -     | 79 channels flat; P <sub>opt</sub> = -1dBm;<br>CTB measured at 545.25 MHz;<br>CSO measured at 546.5 MHz; |
| CTB              | Composite triple beat             | dB   | -    | -60  | -     |  |
| CSO              | Composite second order distortion | dB   | -    | -58  | -     |  |
| CNR              | Carrier to noise ratio            | dB   | -    | -51  | -     |  |
| S <sub>22</sub>  | Output return loss                | dB   | -    | -10  | -     | f=40 to 870 MHz  |
| I <sub>tot</sub> | Total current consumption         | mA   | 340  | -    | 420   | V <sub>B</sub> =6V   |

The module normally operates at V<sub>B</sub>=6V(±0.5)

