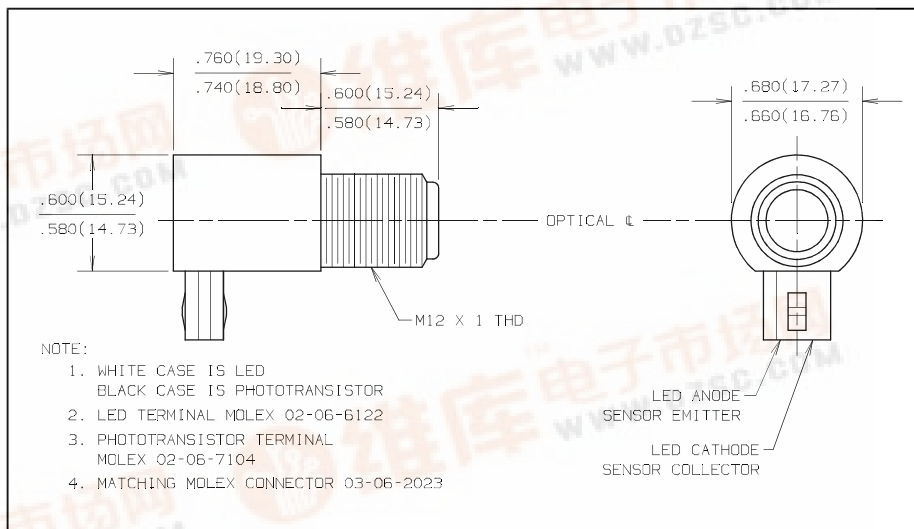




Product Bulletin OPB856
July 1996

Wide Gap Optical Sensor Type OPB856



Features

- Industrial package
- Threaded housing
- Molded connectors

Description

The OPB856 consists of an LED and a phototransistor each mounted in a threaded (M12x1TH) color coded housing. The LED is white, and the phototransistor is black. Both have a molded Molex connector for ease of installation. For cable and connector operations, contact the factory.

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Storage and Operating Temperature Range -40°C to $+85^\circ\text{C}$

Input Diode

Continuous Forward Current 40 mA

Reverse Voltage 2.0 V

Power Dissipation 100 mW⁽¹⁾

Output Phototransistor

Collector-Emitter Voltage 30 V

Emitter-Collector Voltage 5.0 V

Power Dissipation 100 mW⁽¹⁾

Notes:

- (1) Derate Linearly 1.67 mW/ $^\circ\text{C}$ above 25°C .
- (2) d is the distance between lenses along the optical axis.
- (3) All parameters tested using pulse technique.



Type OPB856

Electrical Characteristics (T_A = 25⁰ C unless otherwise noted)

SYMBOL	PARAMETER	MIN	MAX	UNITS	TEST CONDITIONS
Input Diode					
V _F	Forward Voltage		1.7	V	I _F = 20 mA
I _R	Reverse Current		100	μA	V _R = 2 V
Output Phototransistor					
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	30		V	I _C = 100 μA
V _{(BR)ECO}	Emitter-Collector Breakdown Voltage	5.0		V	I _E = 100 μA
I _{CEO}	Collector Dark Current		100	nA	V _{CE} = 10 V, I _F = 0, E _e = 0
Coupled					
I _{C(ON)}	On-State Collector Current ⁽³⁾	1.8		mA	V _{CE} = 5 V, I _F = 20 mA, d = 2" ⁽²⁾

SLOTTED
OPTICAL
SENSOR

Typical Performance Curves

