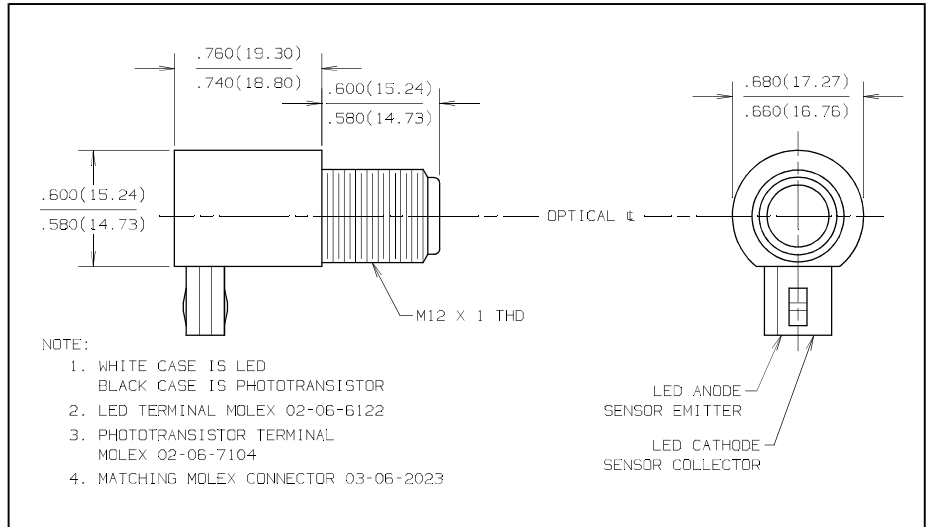


Wide Gap Optical Sensor

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.

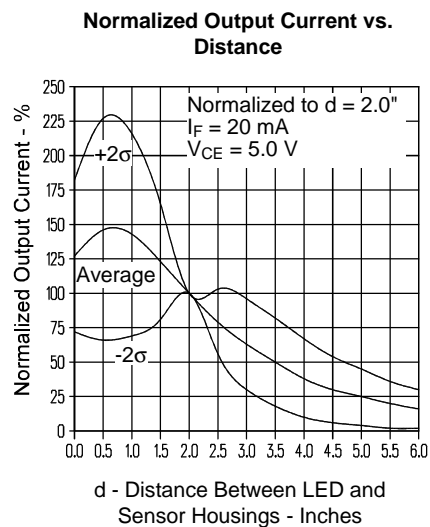
Type OPB856

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	MIN	MAX	UNITS	TEST CONDITIONS
Input Diode					
V_F	Forward Voltage		1.7	V	$I_F = 20\text{ mA}$
I_R	Reverse Current		100	μA	$V_R = 2\text{ V}$
Output Phototransistor					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	30		V	$I_C = 100\ \mu\text{A}$
$V_{(BR)ECO}$	Emitter-Collector Breakdown Voltage	5.0		V	$I_E = 100\ \mu\text{A}$
I_{CEO}	Collector Dark Current		100	nA	$V_{CE} = 10\text{ V}, I_F = 0, E_e = 0$
Coupled					
$I_{C(ON)}$	On-State Collector Current ⁽³⁾	1.8		mA	$V_{CE} = 5\text{ V}, I_F = 20\text{ mA}, d = 2''^{(2)}$

SLOTTED
OPTICAL
CARRIER

Typical Performance Curves



Optek reserves the right to make changes at any time in order to improve design and to supply the best product possible.

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