

OPB 740 Series Reflective Object Sensors

Description

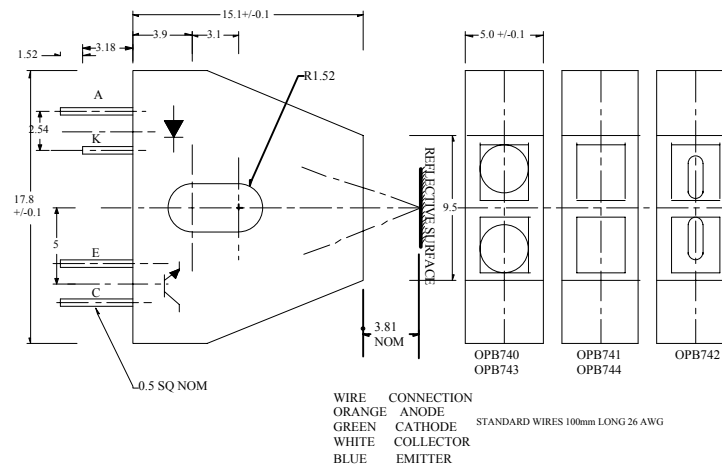
The OPB740 through OPB744 series of reflective object sensors each consist of an infrared emitting diode and an NPN silicon phototransistor mounted side by side on converging optical axes in a black plastic housing. Various options include choice of no windows, blue polysulfone windows for dust protection or opaque windows with offset openings for improved resolution. Available with wires as OPB740W / OPB744W series.

The OPB 745 reflective object sensor consists of an infrared emitting diode and an NPN silicon photodarlington .



OPB 740 = NO WINDOWS
 OPB 741 = BLUE WINDOWS
 OPB 742 = OFFSET WINDOWS
 OPB 743 = NO WINDOWS
 OPB 744 = BLUE WINDOWS
 OPB 745 = OFFSET WINDOWS

MECHANICAL DATA



NOTES

- 1 RMA Flux is recommended. Duration can be extended to 10sec. max. when flow soldering.
- 2 Derate Linearly 1.82mW/°C above 26°C
- 3 d is distance from the assembly face to the reflective surface.
- 4 Reflective surface is Eastam Kodak neutral white test card with 90% diffuse reflectance as a reflective surface.
- 5 Crosstalk is the photocurrent measured with current to the input diode & no reflecting surface
- 6 All parameters tested using pulse technique.

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INPUT DIODE FORWARD DC CURRENT REVERSE DC VOLTAGE POWER DISSIPATION	40mA 2.0V 100mW (2)
OUTPUT SENSOR COLLECTOR-EMITTER VOLTAGE EMITTER-COLLECTOR VOLTAGE POWER DISSIPATION	30V 5.0V 100mW (2)
OUTPUT PHOTODARLINGTON COLLECTOR-EMITTER VOLTAGE EMITTER-COLLECTOR VOLTAGE POWER DISSIPATION	15.0V 5.0V 100mW (2)
OPERATING TEMP	-40 C TO +80°C
STORAGE TEMP	-40 C TO +80°C
LEAD SOLDERING TEMP	240°C (1)

OPTO ELECTRONIC DATA(Ta=25°C)

PARAMETERS	SYMBOL	MIN	MAX	UNITS	TEST CONDITIONS
INPUT DIODE					
Forward Voltage	VF		1.70	V	If = 40mA
Reverse Current	IR		100	μA	Vr = 2.0V
OUTPUT PHOTOTRANSISTOR					
Collector-Emitter Breakdown	V(BR)CEO	30.0		V	Ic = 100μA
Emitter-Collector Breakdown	V(BR)ECO	5.0		V	Ie = 100μA
Collector-Emitter Dark Current	ICEO		100	nA	Vce= 10.0V, If = 0, Ee = 0
COUPLED CHARACTERISTICS					
On state Collector Current OPB740/OPB741/W OPB742/W OPB743/OPB744/W	IC(ON) (3)(4)	50 10 200		μA μA μA	Vce=5.0V, If=40mA, d=3.8mm
Crosstalk OPB740/OPB741/W OPB742/W OPB743/OPB744/W	ICX (5)		10 100 20	μA nA μA	Vce=5V, If=40mA,
Output Photodarlington OPB745. OPB745W					
Collector-Emitter Breakdown Voltage	V(BR)CEO	15.0		V	Ic = 100μA
Emitter-Collector Breakdown Voltage	V(BR)ECO	5.0		V	Ie = 100μA
Collector Dark Current	ICEO		250	nA	Vce=10V, If = 0, Ee = 0
COUPLED					
On-state Collector Current	IC(ON) (3)(4)	1.00		mA	Vce=5.0V, If=40mA, d=3.8mm
Crosstalk	ICX (5)		250	nA	Vce=5V, If=40mA