Absolute Maximum Ratings (T_A = 25 °C unless otherwise noted)	
Operating and Storage Temperature Range	
OPB708, OP709, OPB740, OPB741, OPB742, OPB743, OPB744, OPB745	-40 °C to +85 °C
OPB741WZ, OPB742WZ, OPB743WZ, OPB744WZ, OPB745WZ, OPB746WZ, OPB747WZ, OPB748WZ	-40 °C to +80 °C
Lead Soldering Temperature [1/16 inch (1.6mm) from the case for 5 sec. with soldering iron][1]	260 °C
Input Diode (See OP165 (935 nm), OP265 (890 nm) or OVLAS6CB8 (645 nm) for additional information)	
Forward DC Current	40 mA
Reverse DC Voltage	2 V
Power Dissipation[2]	100 mW
Sensor Output (See OP505 (Transistor), OP705 (R_{BE} Transistor) or OP535 (Darlington) for additional Information)	
Collector-Emitter Voltage	
OPB708	30 V
OPB709	15 V
OPB740, OPB741, OPB742, OPB743, OPB744	30 V
OPB740WZ, OPB741WZ, OPB742WZ, OPB743WZ, OPB744WZ OPB748WZ	30 V
OPB745	15 V
OPB745WZ	15 V
OPB746WZ, OPB747WZ	24 V
Emitter-Collector Voltage	
OPB708 through OPB745, OPB748	5.0 V
OPB746 through OPB747	0.4 V
Power Dissipation[2]	100 mW

Notes:
1. RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering.
2. Derate linearly 1.33 Mw °C above 25 °C.

Electrical Characteristics (T_A = 25 °C unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
645 nm LED (See OVLAS6CB8 for generic information — for reference only)						
V_F	Forward Voltage	-	-	2.6	V	I_F = 20 mA
I_R	Reverse Current	-	-	100	µA	V_R = 2 V
890 nm LED (See OP265 for additional information — for reference only)						
V_F	Forward Voltage	-	-	1.8	V	I_F = 40 mA
I_R	Reverse Current	-	-	100	µA	V_R = 2 V
935 nm LED (See OP165 for additional information — for reference only)						
V_F	Forward Voltage	-	-	1.7	V	I_F = 40 mA
I_R	Reverse Current	-	-	100	µA	V_R = 2 V

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Electrical Characteristics (T_A = 25 °C unless otherwise noted)						
SYMBOL	**PARAMETER**	**MIN**	**TYP**	**MAX**	**UNITS**	**TEST CONDITIONS**
Output R_{BE} Phototransistor (See OP705 for general information — for reference only)						
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	24	-	-	V	I_C = 100 µA
I_{CEO}	Collector Dark Current	-	-	100	nA	V_{CE} = 10 V, I_F = 0, E_E =0
Output Phototransistor (See OP505 for general information — for reference only)						
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	30	-	-	V	I_C = 100 µA
$V_{(BR)ECO}$	Emitter-Collector Breakdown Voltage	5	-	-	V	I_E = 100 µA
I_{CEO}	Collector Dark Current	-	-	100	nA	V_{CE} = 10 V, I_F = 0, E_E =0
Output Photodarlington (See OP535 for general information — for reference only)						
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	15	-	-	V	I_C = 100 µA
$V_{(BR)ECO}$	Emitter-Collector Breakdown Voltage	5	-	-	V	I_E = 100 µA
I_{CEO}	Collector-Emitter Dark Current OPB709, OPB745, OPB745WZ	-	-	25	µA	V_{CE} = 5 V, I_F = 0, E_E =0
Coupled						
$V_{CE(SAT)}$	Saturation Voltage OPB708 OPB709 OPB745, OPB745WZ	 - - -	 - - -	 0.40 1.10 1.10	 V	 I_F = 40 mA, I_c = 3 µA , d = 0.15”(1)(2) I_F = 40 mA, I_c = 3 µA , d = 0.15”(1)(2) I_F = 40 mA, I_c = 400 µA , d = 0.15”(1)(2)
$I_{C(ON)}$(1)(2)	On-State Collector Current OPB708 OPB709 OPB740, OPB740WZ OPB741, OPB741W Z OPB742, OPB742WZ OPB743, OPB743WZ OPB744, OPB744WZ OPB745, OPB745WZ OPB746WZ OPB747WZ OPB748WZ	 0.01 1.00 0.05 0.05 0.01 0.20 0.20 5.00 0.50 0.01 0.01	 - - - - - - - - - - -	 3.00 - 2.50 2.50 0.70 2.00 2.00 26.0 2.50 0.70 0.70	mA	V_{CE} = 5 V, I_F = 40 mA , d = 0.15” (3.810 mm)
I_{CX}(3)	Crosstalk OPB708, OPB709, OPB740, OPB740WZ OPB741, OPB741WZ OPB742, OPB742WZ OPB743, OPB743WZ OPB744, OPB744WZ OPB745, OPB745WZ OPB746WZ OPB747WZ OPB748WZ	 - - - - - - - - - -	 - - - - - - - - - -	 - 10.0 10.0 1.0 20.0 20.0 25.0 1.0 1.0 1.0	µA	V_{CC} = 5 V, I_F = 40 mA

Notes:
1. The distance from the assembly face to the reflective surface is “d”.
2. Reflective surface is Eastman Kodak (Catalog #190 3061) neutral white test card with 90% diffuse reflectance as a reflecting surface.
3. Crosstalk is the photocurrent measured with current to the input diode, no reflective surface and no ambient light (E_E = 0).

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