

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

Storage & Operating Temperature Range	-40° C to +85° C
Lead Soldering Temperature [1/16 inch (1.6 mm) from case for 5 seconds with soldering iron]	260° C

Input Diode (See OP165 for additional information)

Continuous Forward DC Current	40 mA
Reverse Voltage	2 V
Power Dissipation ⁽¹⁾	100 mW

Output Phototransistor (See OP505 for additional information)

Collector-Emitter Voltage	30 V
Emitter-Collector Voltage	5 V
Power Dissipation ⁽¹⁾	100 mW

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

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
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Input Diode (See OP9999 for additional information)

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 (See OP9999 for additional information)

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	30	-	-	V	$I_C = 100 \mu\text{A}$
$V_{(BR)ECO}$	Emitter-Collector Breakdown Voltage	5	-	-	V	$I_E = 100 \mu\text{A}$
I_{CEO}	Collector Dark Current	-	-	100	nA	$V_{CE} = 10 \text{ V}, I_F = 0, E_E = 0$

Combined

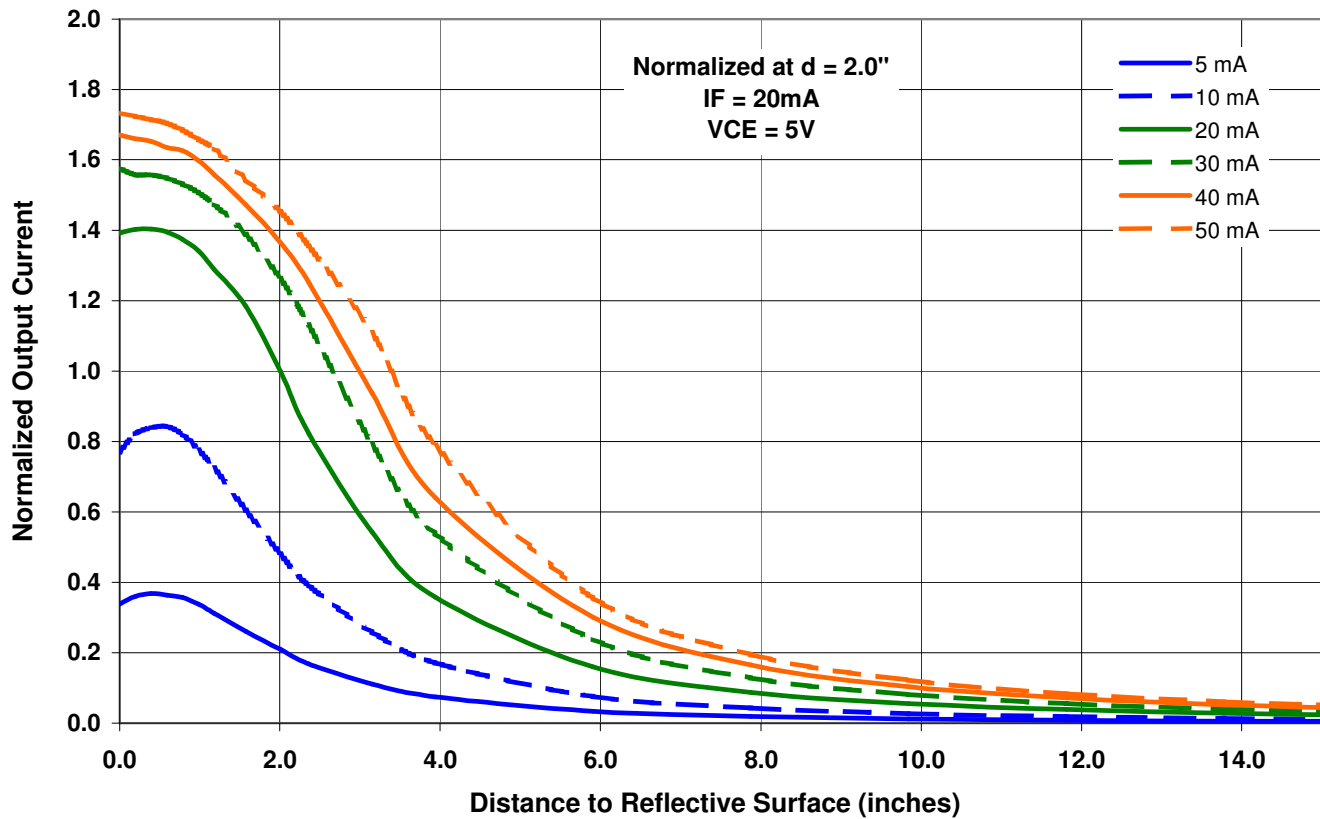
$I_{C(ON)}$	On-State Collector Current ⁽³⁾	1.8	-	-	mA	$V_{CE} = 5 \text{ V}, I_F = 20 \text{ mA}, d = 2'' (50.8 \text{ mm})^{(2)}$
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Notes:

- (1) Derate linearly 1.67 mW/°C above 25 °C..
- (2) Distance between lenses along the optical axis is "d".
- (3) All parameters tested using pulse technique.

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

Normalized Collector Current vs.
Distance between Emitter and Sensor



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