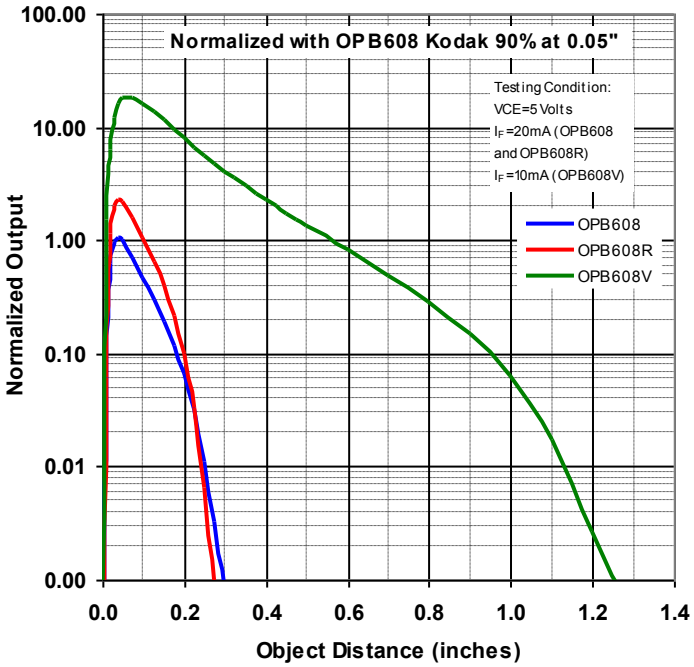
Electrical Characteristics (T_A = 25°C unless otherwise noted)

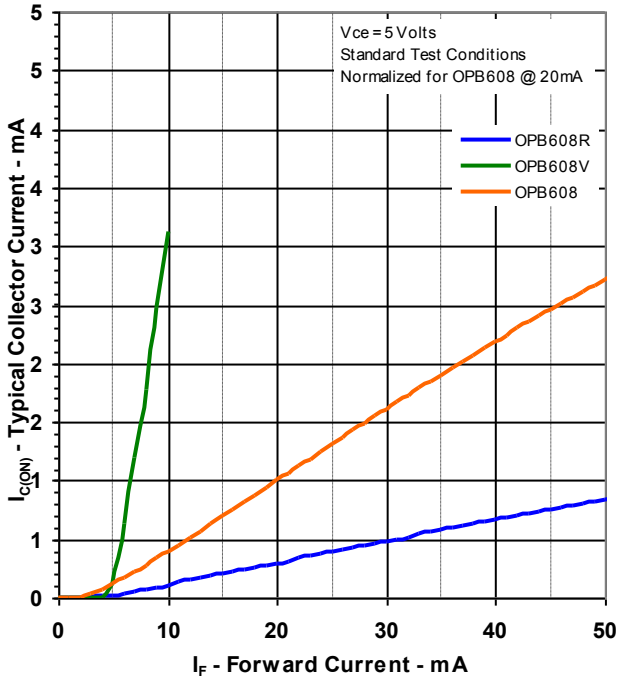
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Infrared-LED (880 nm) (See OP240 for additional information)						
V_F	Forward Voltage	-	-	1.7	V	I_F = 20 mA
I_R	Reverse Current	-	-	100	µA	V_R = 2 V
Infrared-LED (650 nm)						
V_F	Forward Voltage	-	1.9	2.5	V	I_F = 20 mA
V_R	Reverse Voltage	5	-	-	V	I_R = 10 µA
Infrared VCSEL (850 nm) (See OPV330 for additional information)						
V_F	Forward Voltage	-	-	2.2	V	I_F = 7 mA
I_R	Reverse Current	-	-	30	nA	V_R = 5 V
I_{TH}	Threshold Current	2	-	5.5	mA	-
Θ	Beam Divergence	-	12	-	Deg.	I_F = 12 mA
Phototransistor (See OP705 for additional information)						
$V_{(BR)CEO}$	Collector Emitter Breakdown Voltage	30	-	-	V	I_C = 100 µA, E_E = 0 µW/cm^2
$V_{(BR)ECO}$	Emitter Collector Breakdown Voltage	0.4	-	-	V	I_E = 100 µA, E_E = 0 µW/cm^2
$V_{CE(SAT)}$	Saturation Voltage	-	-	.40	V	I_C = 100 µA, I_F = 20 mA, d = 0.053”
I_{CEO}	Collector Emitter Dark Current	-	-	100	nA	V_{CE} = 5 V, E_E = ≤ .10 µW/cm^2, I_F = 0
Combined						
$I_{C(ON)}$	On-State Collector Current OPB608A OPB608B OPB608C OPB608R	 2 1 0.5 1	 - - - -	 - 4 - 6	mA	V_{CE} = 5 V, I_F = 20 mA, d = 0.053 inch (1.35 mm)[1][2]
	OPB608V	5	-	-		V_{CE} = 5 V, I_F = 10 mA, d = 0.053 inch (1.35 mm)[1][2]
$I_{C(OFF)}$	Off-State Collector Current LED VCSEL	 - -	 - -	 100 100	nA	No reflective surface, V_{CE} = 5 V I_F = 20 mA I_F = 10 mA

Notes:
(1) Distance from the front of the lens to reflective surface.
(2) Measured using Eastman Kodak gray card. The white side of the card is used as a 90% diffuse reflective surface. Reference Eastman Kodak catalog #E152 7795
(3) All parameters are tested using pulse techniques.

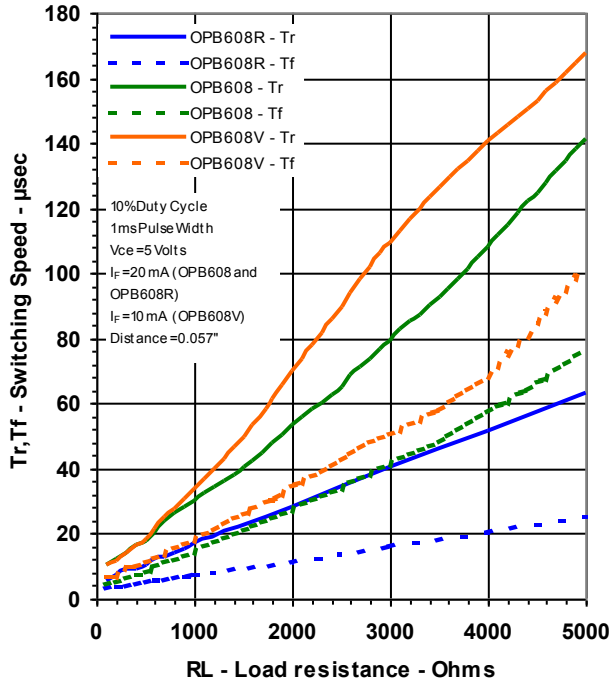
Kodak 90% Card Normalized Output vs Object Distance



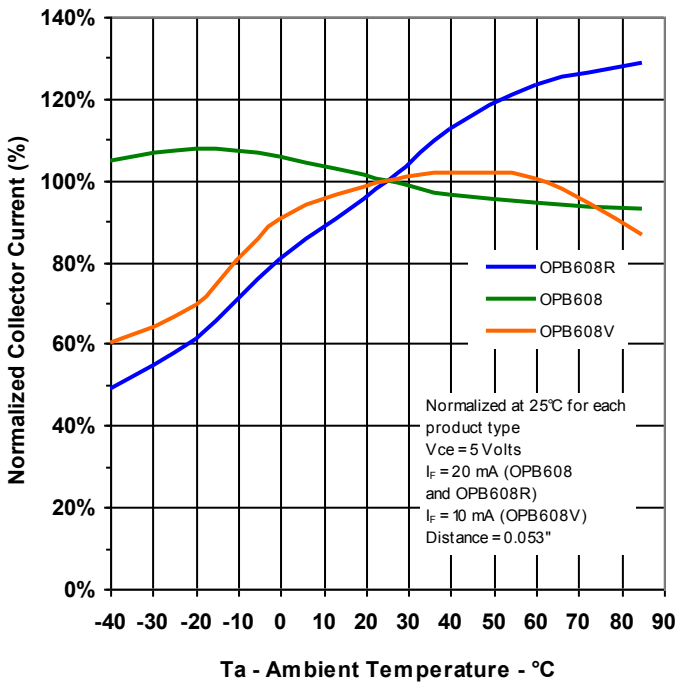
Collector Current vs Diode Forward Current



Rise and Fall vs Load Resistance



Collector Current vs Ambient Temp.



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