

NPN Silicon Phototransistors

OP515A, OP515B, OP515C, OP515D,
OP516A, OP516B, OP516C

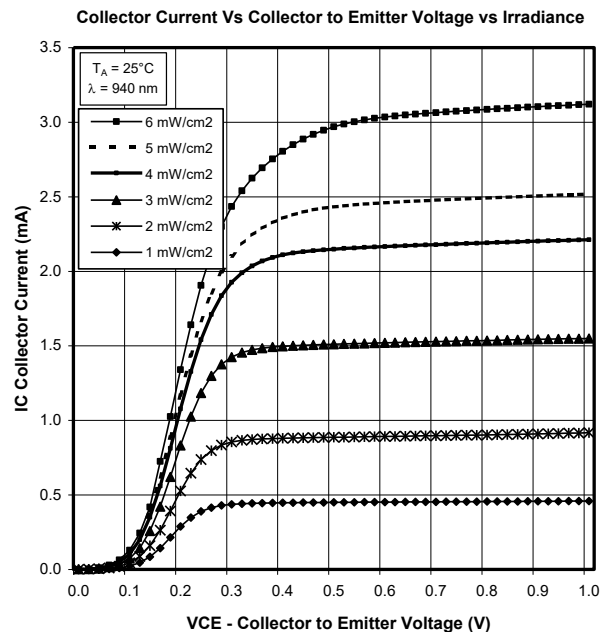
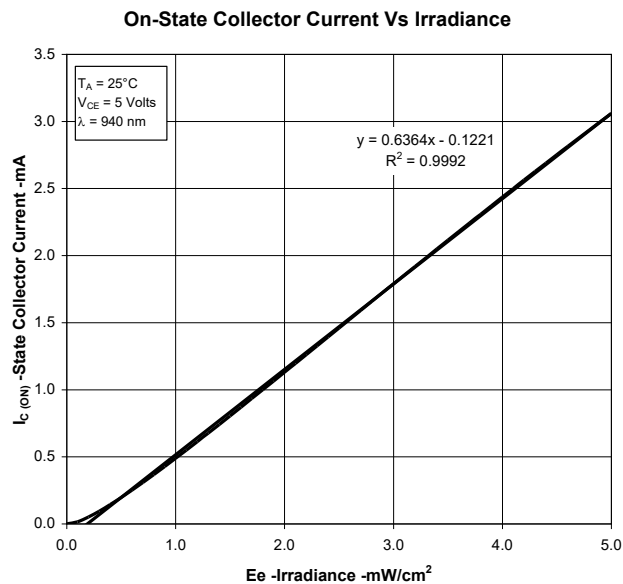
Obsolete (OP516D)



SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
$I_{C(ON)}$	On-State Collector Current OP515D OP515C/OP516C OP515B/OP516B OP515A/OP516A	0.40 1.00 3.00 6.00	- - - -	- - - -	mA	$V_{CE} = 5\text{ V}$, $E_e = 5.0\text{ mW/cm}^2$ ⁽³⁾
I_{CEO}	Collector-Dark Current	-	-	100	nA	$V_{CE} = 10\text{ V}$, $E_e = 0$ ⁽⁴⁾
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	30	-	-	V	$I_C = 100\text{ }\mu\text{A}$
$V_{(BR)ECO}$	Emitter-Collector Breakdown Voltage	5	-	-	V	$I_E = 100\text{ }\mu\text{A}$
$V_{CE(SAT)}$	Collector-Emitter Saturation Voltage OP515/OP516	-	-	0.40	V	$I_C = 400\text{ }\mu\text{A}$, $E_e = 5.0\text{ mW/cm}^2$ ⁽³⁾
$\Delta I_C/\Delta T$	Relative I_C Changes with Temperature OP515A-D and OP516A-C series	-	1.00	-	%/°C	$V_{CE} = 5\text{ V}$, $E_e = 1.0\text{ mW/cm}^2$
I_{ECO}	Emitter-Reverse Current	-	-	100	μA	$V_{EC} = 0.4\text{ V}$

Notes:

- (1) $E_{e(APT)}$ is a measurement of the average apertured radiant energy incident upon a sensing area 0.250" (6.35 mm) in diameter and perpendicular to and centered to the mechanical axis of the emitting surface at a distance of 0.466" (11.84 mm). $E_{e(APT)}$ is not necessarily uniform within the measured area.
- (2) Derating linearly 0.71 mW/°C above 25 °C
- (3) Light source is an unfiltered GaAs LED with a peak emission wavelength of 935 nm and a radiometric intensity level which varies less than 10% over the entire lens surface of the phototransistor being tested.
- (4) To calculate typical collector dark current in nA, use the formula $I_{CED} = 10^{(0.040T_A - 3.4)}$ where T_A is ambient temperature in °C.



General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.