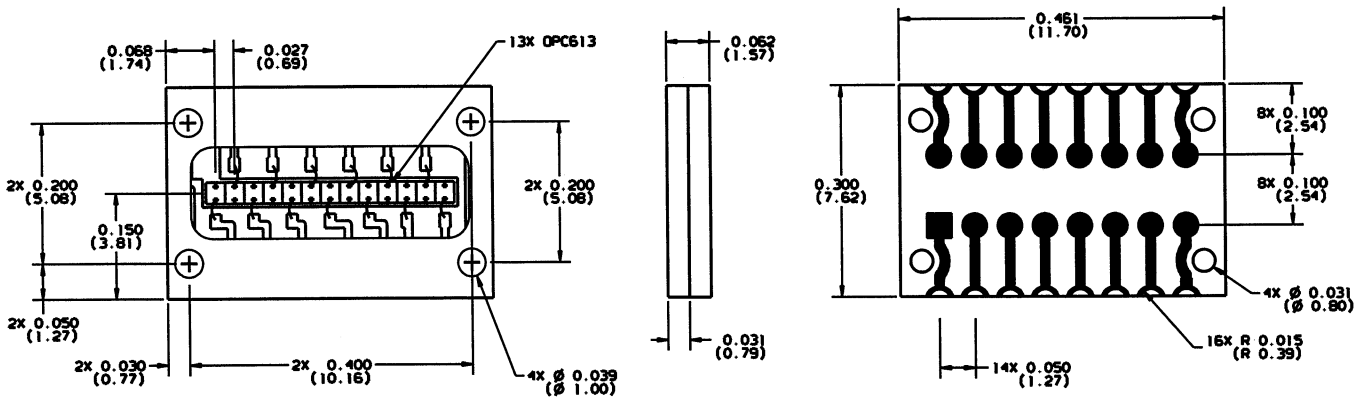
PRELIMINARY

OPTEK

SMD Multi Element Phototransistor
Type OPR5013



DIMENSIONS ARE IN INCHES (MILLIMETERS

Features

- Surface mountable
- Closely matched responsivity
- Precise active area location
- High temperature operation

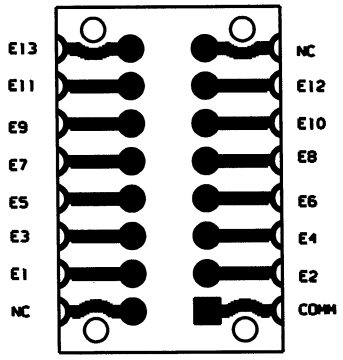
Description

The OPR5013 is a thirteen element NPN silicon phototransistor in a high temperature polyimide chip carrier. The single chip construction insures excellent matching and very tight dimensional tolerances between active areas. The custom opaque package material shields the photodiodes from stray light and can withstand multiple exposures to the most demanding soldering conditions. The wrap around solder pads are gold plated for exceptional storage and wetting characteristics.

Absolute Maximum Ratings (T_A = 25° C unless otherwise noted)

Collector-Emitter Voltage	30 V
Emitter-Collector Voltage	5 V
Storage and Operating Temperature	-55° C to +125° C
Soldering Temperature (Vapor Phase Reflow for 30 sec.)	235° C
Power Dissipation (derate @ 1.00 mW/° C above 25° C)	100 mW

PIN OUT



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

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
$I_{C(ON)}$	On State Collector Current	1.0			mA	V_{CE} = 5 V, E_e = 150 μW/cm² (890 nm light source)
I_{CEO}	Dark Current			100	nA	V_{CE} = 5 V, E_e = 0
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	30			V	I_C = 100 μA
$V_{(BR)ECO}$	Emitter-Collector Breakdown Voltage	5			V	I_e = 100 μA
$V_{CE(SAT)}$	Saturation Voltage			0.4	V	I_C = 100 μA, E_e = 5 mW/cm²
t_r, t_f	Rise Time, Fall Time		2.5		μs	V_{CC} = 5 V, I_C = 800 μA, R = 100 Ω
$\frac{I_{C(ON)}\ Max}{I_{C(ON)}\ Min}$	Match		1.5	2		