

**66343****PHOTOTRANSISTOR OUTPUT SURFACE MOUNT  
OPTOCOUPLER WITH 850 nm LED****OPTOELECTRONIC PRODUCTS  
DIVISION**

05/21/2009

**Features:**

- Small size saves real estate
- Pick and place compatible
- Military temperature range
- Solderable construction and terminations
- Designed to be Proton radiation tolerant

**Applications:**

- Eliminate ground loops
- Level shifting
- Line receiver
- Switching power supplies
- Motor control
- Pulse transformer replacement

**DESCRIPTION**

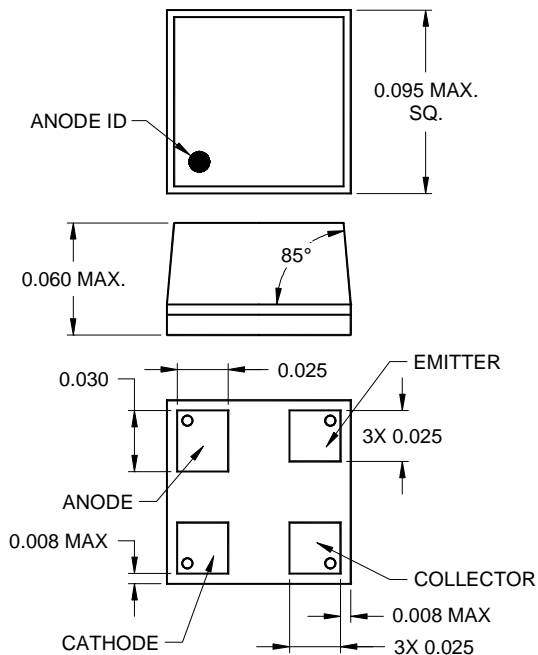
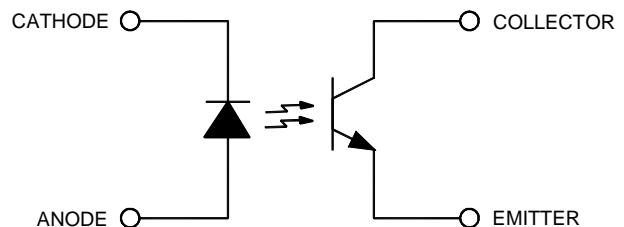
The **66343** is designed to be used with both epoxy-based surface mounting and reflow solder mounting techniques. State-of-the-art optocoupler technology is utilized. A high efficiency infrared 850 nm LED is coupled to a light-sensitive silicon phototransistor. This device is ideal for automated assembly in pick-and-place applications.

**ABSOLUTE MAXIMUM RATINGS**

Input to Output Isolation Voltage .....	+1 kVdc
Collector-Emitter Voltage .....	35 V
Reverse Input Voltage .....	2 V
Input Diode Continuous Forward Current at (or below) 65°C Free-Air Temperature (see note 1) .....	50 mA
Storage Temperature .....	-65°C to +150°C
Operating Free-Air Temperature Range .....	-55°C to +125°C
Lead Solder Temperature .....	245°C

**Notes:**

1. Derate linearly to 125°C free-air temperature at the rate of 0.4 mW/°C above 65°C.

**Package Dimensions****Schematic Diagram**

**ELECTRICAL CHARACTERISTICS**T<sub>A</sub> = 25°C unless otherwise specified.

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Input diode Static Reverse Current	I <sub>R</sub>			100	μA	V <sub>R</sub> = 2V
Input Diode Static Reverse Voltage	V <sub>R</sub>	2			V	I <sub>R</sub> = 10 μA
Input Diode Static Forward Voltage	V <sub>F</sub>			1.6	V	I <sub>F</sub> = 20 mA

**OUTPUT TRANSISTOR**T<sub>A</sub> = 25°C unless otherwise specified.

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Collector-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	35			V	I <sub>C</sub> = 1 mA, I <sub>B</sub> = 0, I <sub>F</sub> = 0

**COUPLED CHARACTERISTICS**T<sub>A</sub> = 25°C unless otherwise specified.

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Current Transfer Ratio	CTR	200			%	V <sub>CE</sub> = 5 V, I <sub>F</sub> = 10 mA
Off State Collector Current	I <sub>C(OFF)</sub>			50	nA	V <sub>CE</sub> = 20 V, I <sub>F</sub> = 0 mA
Collector-Emitter Saturation Voltage	V <sub>CE(SAT)</sub>			0.3	V	I <sub>F</sub> = 20 mA, I <sub>C</sub> = 10 mA, I <sub>B</sub> = 0
Rise Time or Fall Time	t <sub>r</sub> or t <sub>f</sub>		10 10		μs	V <sub>CC</sub> = 10 V, I <sub>F</sub> = 5 mA, R <sub>L</sub> = 100 Ω

**NOTES:**

1. Custom electrical specifications are available.

**RECOMMENDED OPERATING CONDITIONS:**

PARAMETER	SYMBOL	MIN	MAX	UNITS
Input Current, Low Level	I <sub>FL</sub>	0	100	μA
Input Current, High Level	I <sub>FH</sub>	1	20	mA
Supply Voltage	V <sub>CC</sub>	5.0	20	V
Operating Temperature	T <sub>A</sub>	-55	125	°C