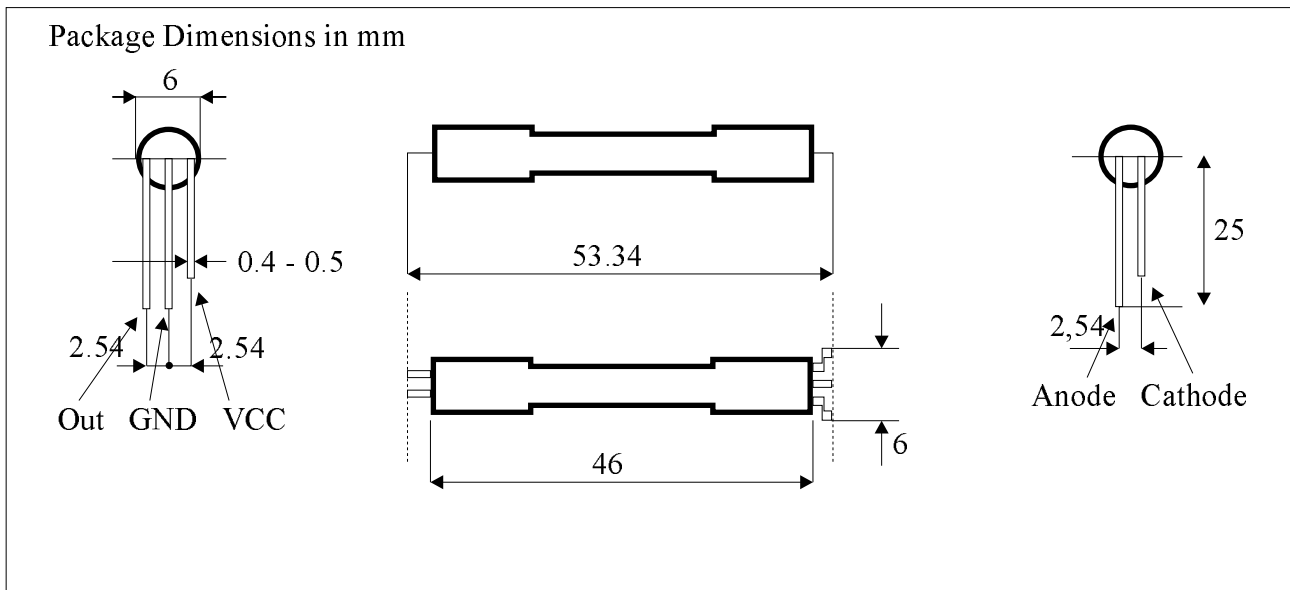

SINGLE CHANNEL OPTOCOUPLER EL - HV 50B



Features

- 20 000 Volt Breakdown Voltage
- Long Time Stability
- Fast Switching Time
- Receiver bipolar IC with open - collector output
- Transfer rate up to 5 Mbit/s
- High Reliability

DESCRIPTION

The EL - HV 50B is an optically coupled pair.

The Emitter is a gallium arsenide phosphide (GaAsP) LED.

The Detector is a transimpedance amplifier with digital TTL open collector output stage and integrated photodiode. The detector includes a Schmitt trigger function to provide stable output states over the whole dynamic range. With noise free Vcc and GND no undefined output signal is possible.

EL – HV 50B
Maximum Ratings (25 °C)

Emitter (GaAsP)		
Reverse Voltage	3	V
Forward Current	50	mA
	At 60 °C	
	25	mA
Surge Current (t ≤ 10µs)	1.0	A
Power Dissipation	120	mW

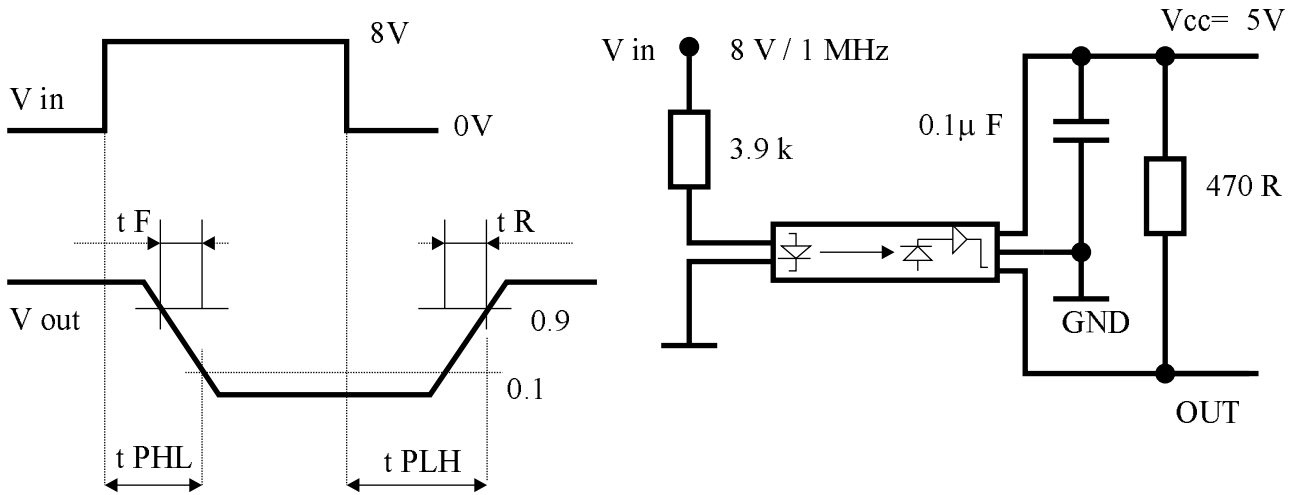
Detector / Receiver		
Supply Voltage Range without Damage	- 0.5 to 15	V
Minimum Supply Voltage for Function	4	V
Minimum Pull-up Resistance, Vcc = 5V	330	Ω
	Vcc = 15V	1000
		Ω
Output Voltage	- 0.5 to 15	V
Output Current	50	mA
Power Dissipation	100	mW

Package		
Storage Temperature	-40 to 100	°C
Operating Temperature	-40 to +85	°C
Junction Temperature	100	°C
Soldering Temperature (t ≤ 5s) *	280	°C
Isolation Voltage	20 000	V

Characteristics (T = 25 °C, Vcc = 5V)		
Emitter		
Wavelength	645 to 675	nm
Forward Voltage	1.6	V
	(≤ 2.0)	
Input Capacitance	30	pF
Detector / Receiver		
Current Consumption (without output current)	4	mA
Propagation Delay (t PHL)	250	ns
Rise Time (t R)	40	ns
Propagation Delay (t PLH)	150	ns
Fall Time (t F)	20	ns
Complete Coupler		
Input Current for Output LO	≥ 2.0	mA
Input Current for Output HI	≤ 0.2	mA

*** Due to their temperature sensitivity,
the Optocouplers have to be soldered by hand**

SWITCHING TEST CIRCUIT



LAYOUT DIMENSIONS (TOP VIEW)

