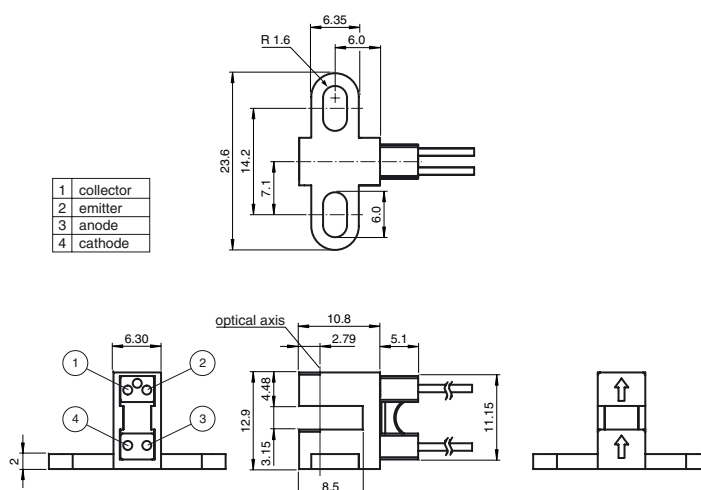




Dimensions



Model Number

GL3-T/153

Photoelectric slot sensor
with fixed cable

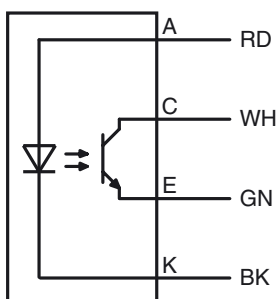
Features

- Miniature design
- Optimized for the detection of small parts
- High switching frequency

Product information

The GL2 & GL3 miniature slot sensor is the smallest slot sensor in its family optimized to the requirements in semiconductors industry for small part detection. A wide voltage range of 5 V DC ... 30 V DC and a extreme fast response time of 25 μ s stands for the quality of this sensor. The GL2 & GL3 sensor can be directly connected to a comparator or Schmitt-trigger circuit. Due to a variety of different housings and an optimized housing concept offers the sensor a maximum of freedom in a crowded mounting environment.

Electrical connection



Technical data

General specifications

Light source	IRET , 940 nm
Light type	IRET
Fork width	3.15 mm
Ambient light limit	1000 Lux

Electrical specifications

Operating voltage	U_B	5 ... 30 V DC
Ripple		10 %
Emitter		
Light type		940 nm IR light
Forward voltage	V_F	< 1.6 V
Peak forward voltage	V_{FM}	30 V
Forward current	I_F	50 mA
Peak forward current	I_{FM}	1 A
Reverse voltage	V_R	5 V
Reverse current	I_R	$\leq 10 \mu A$
Power loss		75 mW

Receiver

Output type		NPN
C-E breakdown voltage	V_{CEO}	30 V
E-C breakdown voltage	V_{ECO}	5 V
Collector dark current	I_{CEO}	< 1 μA
Collector DC current	I_C	20 mA
Power loss	P_D	75 mW

Output

Signal output	1 NPN , photo transistor
Switching voltage	max. 30 V DC
Switching current	20 mA
Response time	25 μs

Ambient conditions

Ambient temperature	-20 ... 85 °C (-4 ... 185 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

Mechanical specifications

Core cross-section	4 x 0.08 mm ²
Protection degree	IP30
Connection	610 mm, PVC cable , Individual colored wires
Material	
Housing	PC
Mass	7 g

Approvals and certificates

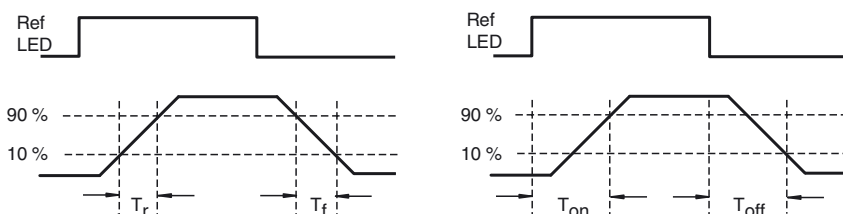
CCC approval CCC approval / marking not required for products rated $\leq 36 V$

Curves/Diagrams

Characteristic response curve

GL3-

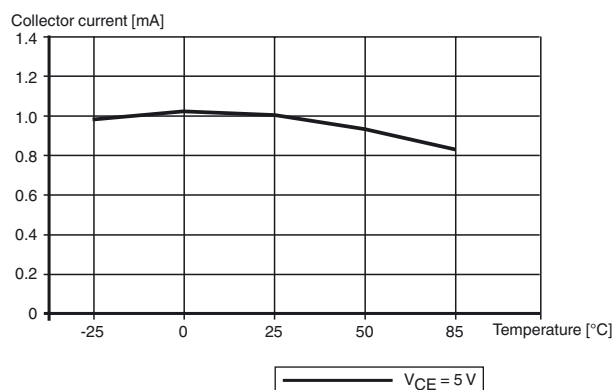
The rise (T_r) the fall (T_f) and the response time (T_{on} / T_{off}) is tested with reference LED.



Curves/Diagrams

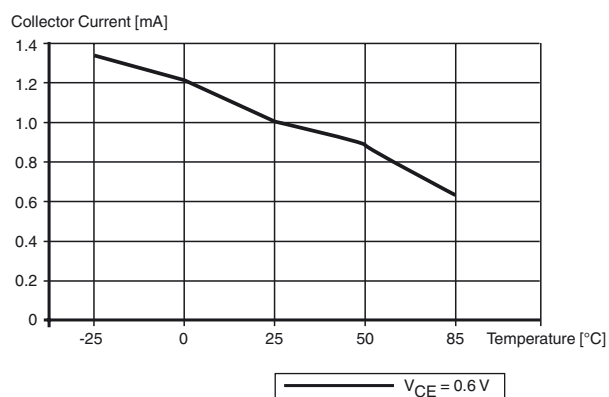
Collector Current vs Temperature

GL3-



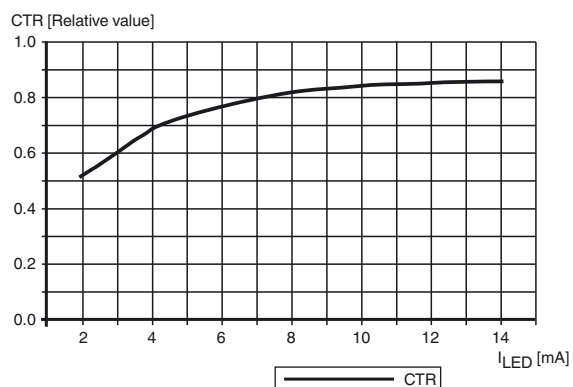
Collector Current vs Temperature

GL3-



Current Transfer Ratio

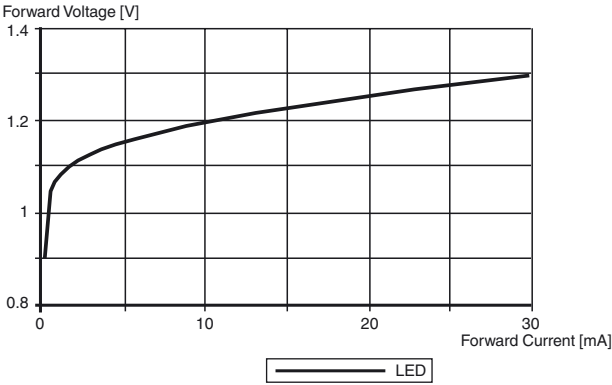
GL3-

 $(V_{CE} = 5\text{ V})$ 



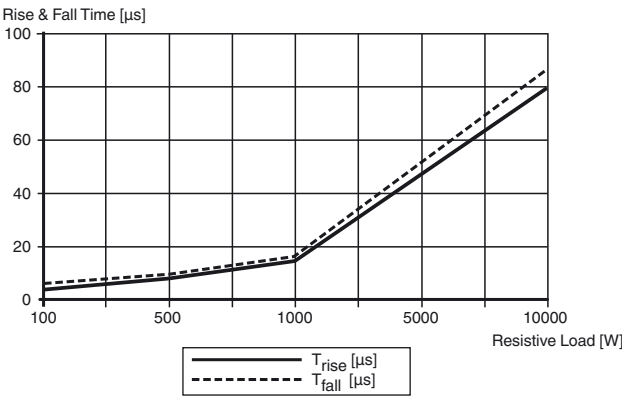
I_{LED} Forward Bias Characteristics

GL3-



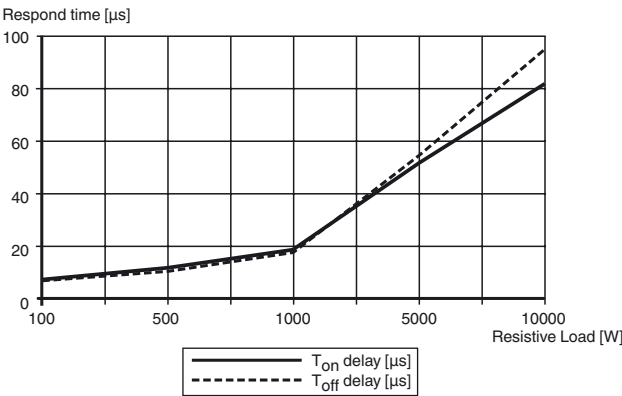
Non-Saturated Switching vs Resistive Load

GL3-

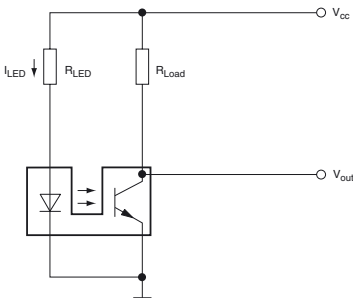


Non-Saturated Switching vs Resistive Load

GL3-



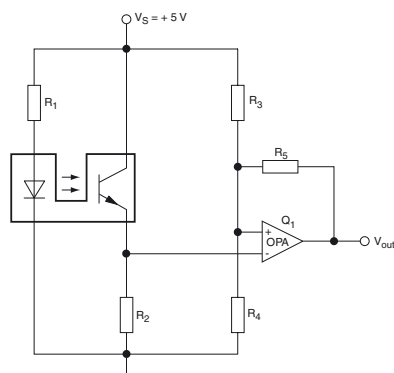
Connection example



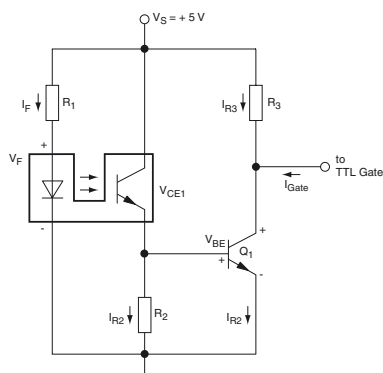
3 simple steps:

- Choose power supply
- Choose LED current (set resistor R_{LED})
- Choose load current (set resistor R_{LOAD})

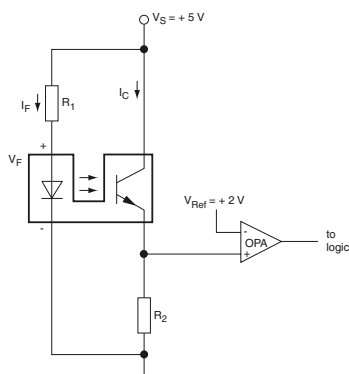
Possible connections



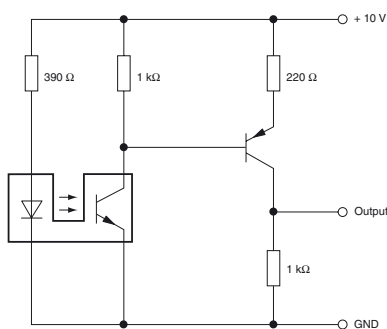
Circuit with voltage comparator



Circuit with additional transistor



Circuit with Op Amp



Circuit with PNP transistor output