

INFRARED DREAM TEAM.



#INFRAREDREAMTEAM

*WE speed up
the future*

Infrared Dream Team

The infrared emitters and photodetectors from Würth Elektronik ensure perfect optical coupling and extremely fast switching times. Provided in all industry standard packages. Optimize your sensing applications, data transfer or detection uses. Available ex stock. Samples free of charge.

- Perfect optical coupling
- Fast switching times
- Wavelengths: 850 & 940 nm
- With/without daylight filter

For further information, please visit: www.we-online.com/infrared

Infrared LEDs and Photodetectors

Optoelectronics at glance

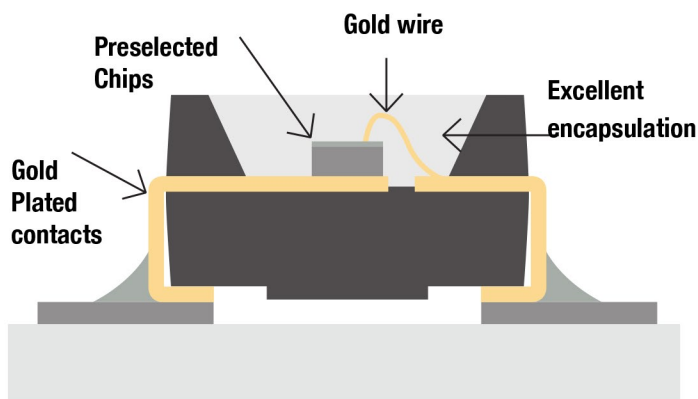
Your Benefits



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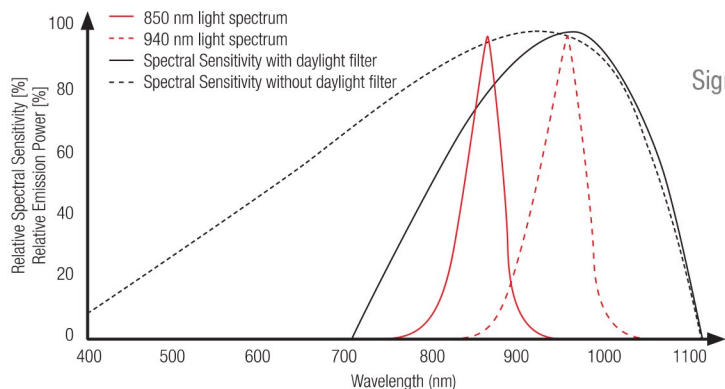


A gold wire was used for all parts for an excellent output



Available with or without daylight filter.

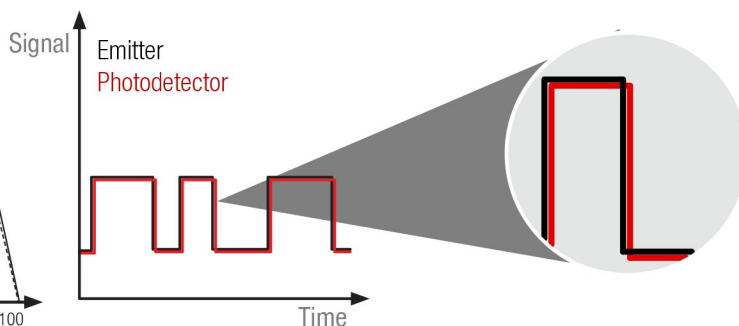
Special features: High photo sensitivity and linearity



The maximum sensitivity of the photodetectors perfectly matches the emitter spectrum

100% @ 940 nm with filter;

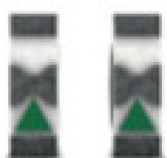
95% @ 850 nm with filter



Switching Time up to 100 MHz

The extremely fast switching time of a few nanoseconds ensures high data transfer rates.

0402 (1005)
0603 (1608)
0805 (2012)
1104 (3010)



1206 (3216)
3528 mm
3535 mm
3/5 mm THT



Available in the industry Standard Packages.

One footprint for emitter & detector

Perfect optical emitter-detector coupling.

One package for emitter and detector



RoHS
COMPLIANT



REACH
COMPLIANT



HALOGEN
FREE



ESD



MSL



PHOTOBIOLOGICAL
SAFETY

Please handle with care, ESD and MSL sensitive device.
All devices tested for Photobiological Safety according to IEC 62471
and No Risk group for blue light and retinal thermal damage

Photodiodes	Series	Size	Photocurrent	Viewing Angle
	WL-SDCB	0805 / 1206	1.8 μ A	140°
	WL-SDSB	1002 / 1104	2.5 μ A	150°
	WL-TDRW	THT 3mm / 5mm	28 μ A	35°
Phototransistors	Series	Size	Collector current	Viewing Angle
	WL-STCW	0603 / 0805 / 1206	1.6 mA	150°
	WL-STCB	0603 / 1206	1.8 mA	140°
	WL-STSW	1002 / 1104	2.5 mA	150°
Infrared LEDs	Series	Size	Radiant Intensity (mW/sr)	Viewing Angle
	WL-SICW	0402 / 0603 / 1206	5 - 6 @ 20mA	80° - 150°
	WL-SISW	0402 / 1106 / 1104 1002 1206	0.8 - 11 @ 20mA	45° - 150°
	WL-SIRW	1206	5 - 20 @ 20mA	30°
Infrared LEDs	Series	Size	Radiant Intensity (mW/sr)	Viewing Angle
	WL-SITW	3528	8 - 9 @ 50mA	120°
	WL-SIMW	3535	220 - 350 @ 1mA	90° - 130°
	WL-TIRW	THT 3mm / 5mm	30 - 85 @ 50mA	35°

Applications



Security systems
e.g. smoke detector, camera



Light barriers
e.g. security areas, counter and encoder, optoelectronic sensors, data transmission



Biometric Identification
e.g. iris recognition, face recognition, vein recognition



Screens
e.g. touch & touchless



Home appliances
e.g. remote control, cleaning robot



Sensors
e.g. automatic doors, automatic light, presence sensors



Biometric & health monitoring
e.g. heart rate monitoring, pulse oximetry, blood pressure

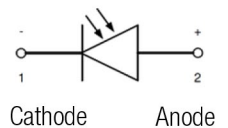


Automatic switches
e.g. touchless water syphons, toilet systems, hygiene applications, water saving systems

Characteristics

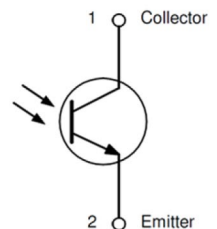
Photodiode

- Photoelectric detector in which a photocurrent is generated by light
- Output in μ A
- Contact: Anode and Cathode
- Peak Wavelength Sensitivity
- Spectral Range of Bandwidth
- Dark Current
- Switching times in ns



Phototransistor (NPN Transistor)

- Amplified photodiode
- Output in mA
- Contact: Collector and Emitter
- Peak Wavelength Sensitivity
- Spectral Range of Bandwidth
- Collector-Emitter Dark Current
- Switching times in μ s



Order your Design Kit today!