

Phototransistor Optocouplers Deliver Accuracy and Energy Efficiency for Industrial Applications With High, Linear CTR Range, Low Forward Current of 0.5 mA, and High Temperature Operation to +125 °C in Four Package Options

Product Benefits:

- Enhanced CTR linearity over temperature and forward current
- Low forward current of 0.5 mA
- High temperature operation up to +125 °C
- Offered in four packages: DIL-4; long creepage LSOP-4; compact SOP-4; and half-pitch SSOP-4
- High maximum rated isolation voltage up to 5000 VRMS
- Creepage and clearance distances to 8 mm
- RoHS-compliant, halogen-free, and [Vishay Green](#)



Market Applications:

- Signal transmission with galvanic and noise isolation in DC/DC converters, programmable controllers, and power supplies for micro mobility, industrial, energy metering, telecom, and consumer applications

The News:

Vishay Intertechnology introduces a new series of phototransistor optocouplers that combine a high and linear current transfer ratio (CTR) over temperature with a low forward current of 0.5 mA. Offering high temperature operation up to +125 °C in a choice of four packages, the Vishay Semiconductors VOx619A series is designed to deliver accuracy and energy efficiency in industrial applications.

- Offering 50 % lower forward current than the previous-generation solution, VOx619A series devices reduce power consumption for more energy-efficient designs
- The optocouplers can be used with devices that have limited current-driving capabilities, such as microcontrollers
- While CTR can drop to less than 50 % of the specified value at 25 °C for traditional optocouplers, it remains at > 75 % for the VOx619A series over its wide temperature range
 - This linear behavior ensures that signals are transmitted with high fidelity, which is crucial for applications requiring precise data handling
- While previous-generation solutions offered temperature ranges up to +110 °C – and traditional couplers are often only qualified to +85 °C – the extended temperature range of the VOx619A series guarantees reliable performance in extreme conditions
- The devices feature an infrared emitting diode that is optically coupled to a phototransistor detector
- Optocouplers in the DIL-4 and LSOP-4 packages offer higher maximum rated isolation voltage and creepage and clearance distances, while devices in the SOP-4 and SSOP-4 provide more compact options to save board space



The Key Specifications:

Part #	VO619A	VOL619A	VOM619A	VOS619A
Package	DIL-4	LSOP-4	SOP-4	SSOP-4
Creepage distance	≥ 7 mm	≥ 8 mm	≥ 5 mm	
V _{ISO}	5000 V _{RMS}		3750 V _{RMS}	
Min. forward current	0.5 mA			
V _{CEO}	80 V			
Operating temp.	-55 °C to +125 °C			

Availability:

Samples and production quantities of the VOx619A series are available now, with lead times of eight weeks.

To access the product datasheets on the Vishay Website, go to

<http://www.vishay.com/ppg?80521> (VOL619A)

<http://www.vishay.com/ppg?80522> (VO619A)

<http://www.vishay.com/ppg?80523> (VOM619A)

<http://www.vishay.com/ppg?80524> (VOS619A)

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