

**Photovoltaic Isolator  
Solid-State  
Opto-Isolated MOSFET Gate Driver  
Dual-Channel, 5V, 5 $\mu$ A**

## General Description

The PVI5033R Photovoltaic Isolator is a dual-channel, opto-isolated driver capable of directly driving gates of power MOSFETs or IGBTs. It utilizes a monolithic integrated circuit photovoltaic generator of novel construction as its output. The output is controlled by radiation from a GaAlAs light emitting diode (LED) which is optically isolated from the photovoltaic generator.

The PVI5033R is ideally suited for applications requiring high-current and/or high voltage switching with optical isolation between the low-level driving circuitry and high-energy or high-voltage load circuits. It can be used for directly driving gates of power MOSFETs. The dual-channel configuration allows its outputs to drive independent discrete power MOSFETs, or be connected in parallel or in series to provide higher-current drive for power MOSFETs or higher-voltage drive for IGBTs. PVI5033R employs a fast turn-off circuitry.

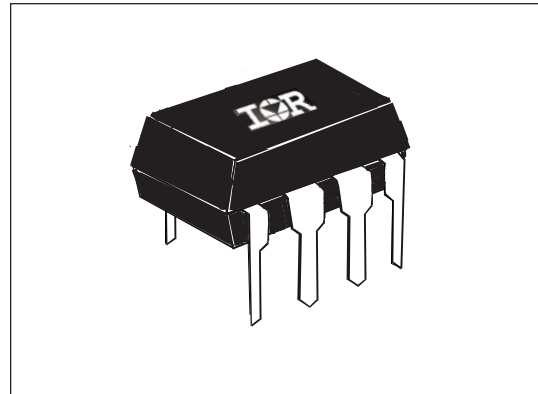
PVI5033R Photovoltaic Isolators are packaged in an 8-pin, molded DIP package with either thru-hole or “gull-wing” terminals. It is available in standard plastic shipping tubes or on tape-and-reel. Refer to Part Identification information.

## Applications

- Telecommunications
- Load Distribution
- Industrial Controls
- Instrumentation and Measurement
- Electronic Ballast

## Features

- Monolithic construction
- 3,750 V<sub>RMS</sub> I/O isolation
- 1,200 V<sub>DC</sub> output-to-output isolation
- Dual-Channel application flexibility
- Solid-State Reliability
- UL Recognized and BABT Certified



## Part Identification

PVI5033RPbF	thru-hole
PVI5033RSPbF	SMT
PVI5033RS-TPbF	SMT, Tape and Reel



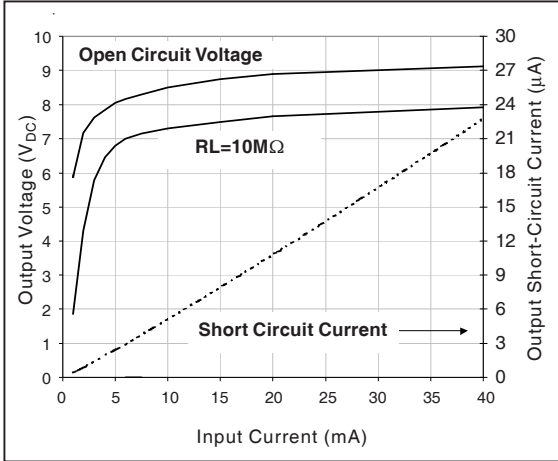


Figure 1. Typical Output Characteristics

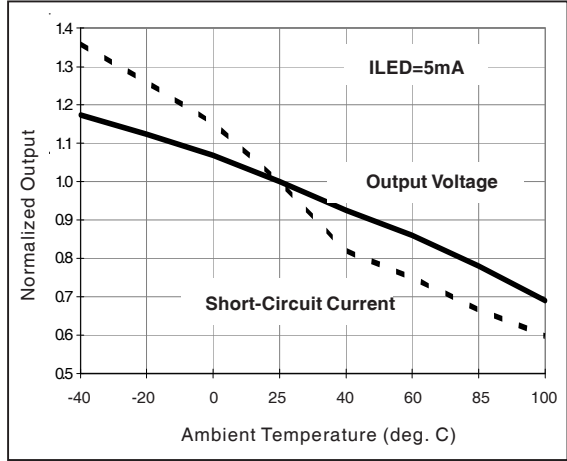


Figure 2. Typical Variation of Output

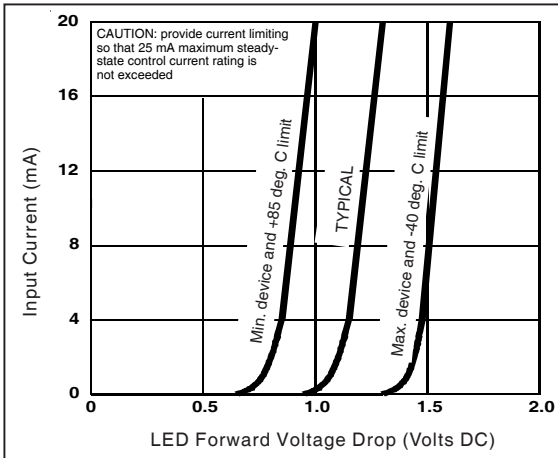


Figure 3. Input Characteristics (Current Controlled)

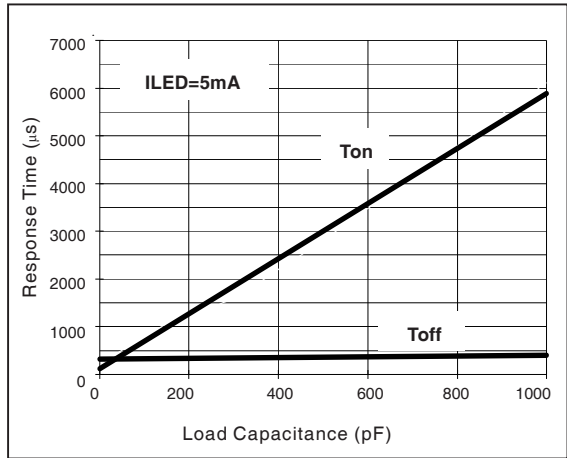
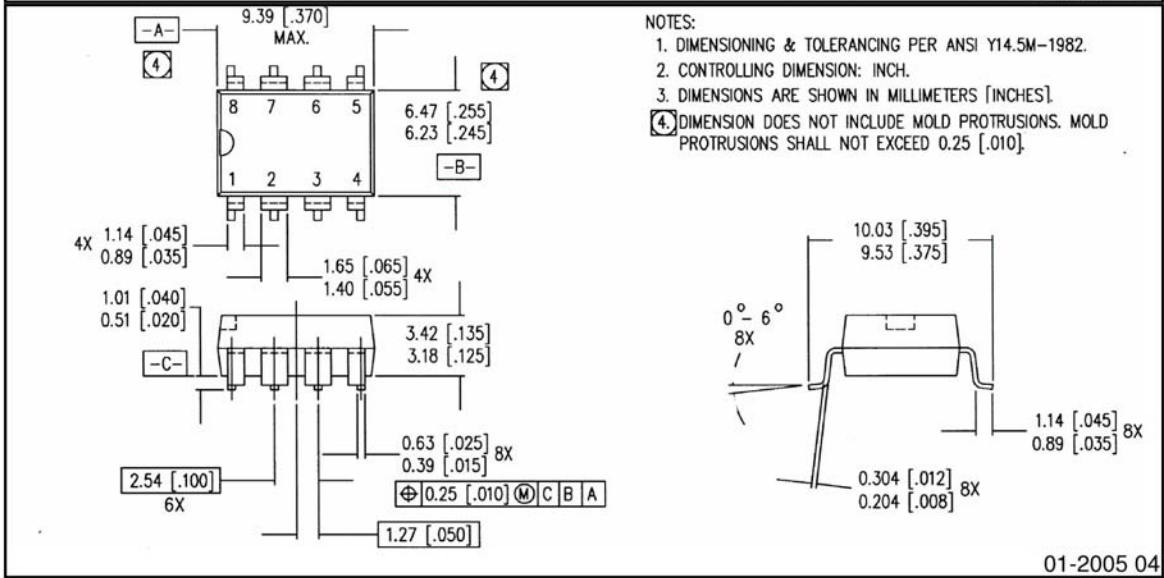
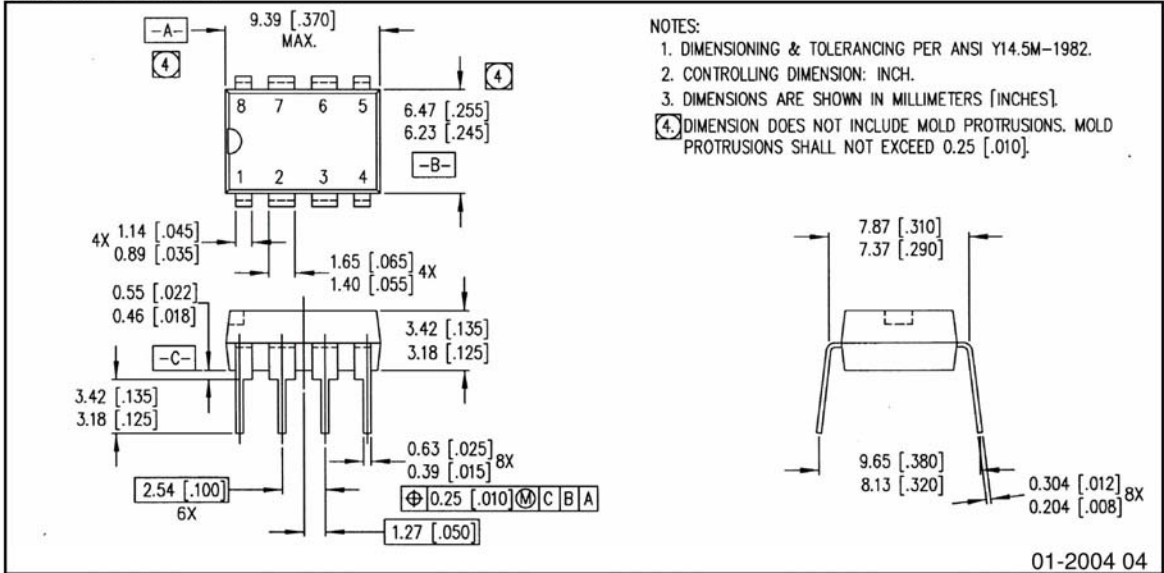


Figure 4. Typical Response Time

## Case Outlines



Note: For the most current drawing please refer to IR website at: <http://www.irf.com/package/>

**Qualification information<sup>†</sup>**

Qualification level	Indusrid (per JEDEC JESD471 <sup>††</sup> guidelines)	
Moisture Sensitivity Level	PVI5033RPbF	N/A
	PVI5033RSPbF	MSL4
	PVI5033RS-TPbF	(per JEDEC J-STD-020E & JEDEC J-STD-033C <sup>††</sup> )
RoHS compliant	Yes	

† Qualification standards can be found at International Rectifier's web site  
<http://www.irf.com/product-info/reliability>

†† Applicable version of JEDEC standard at the time of product release.

**Revision History**

Date	Comment
4/24/2015	<ul style="list-style-type: none"> <li>• Added Qualification Information table on page 5.</li> <li>• Updated data sheet based on corporate template.</li> </ul>

International  
 Rectifier

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 To contact International Rectifier, please visit <http://www.irf.com/whoto-call/>

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