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New TSMP6000 and TSMP77000 IR Receivers for Universal IR 3D TV Eyewear

The News:

New Infrared Receivers for 3D TV Are Capable of Receiving Raw IR-Synchronization Signals for Universal Active Eyewear

Vishay Intertechnology, Inc. (NYSE: VSH) broadens its optoelectronics portfolio with the release of two infrared receivers developed specifically for use with universal IR synchronized active eyewear used with 3D TV sets. The TSMP6000 and TSMP77000 are surface-mount IR receivers designed to be assembled into active 3D glasses, where they receive infrared signals from the TV set and ensure the glasses' LCD shutters open and close in proper synchronization to create the 3D effect.

Features:

- Receive carrier frequencies from 20 kHz to 60 kHz
- Sensitive to infrared wavelengths from 800 nm to 1000 nm
- Integrate a photodiode, amplifier, signal shaping IC in one package
 - Enables more streamlined designs for 3D glasses
- Can be mounted in a side- or top view
- Range up to 5 meters using a single TSAL6200 emitter
- Viewing angle of $\pm 50^\circ$ allow for significant head movement without signal loss
- Offer dimensions of 2.3 mm x 3.0 mm x 6.8 mm (TSMP77000) and 4.0 mm x 5.3 mm x 7.5 mm (TSMP6000)
- Available with single (TSMP6000) or dual (TSMP77000) lenses
- Compliant to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC





Key Specifications:

- Carrier frequencies: 20 kHz to 60 kHz
- Wavelength sensitivity: 800 nm to 1000 nm
- Supply voltage range: 2.5 V to 5.5 V
- Supply current: 0.7 mA typical at 3 V
- Typical irradiance: 12 mW/m²
- Transmit distance: 5 m typical with one TSAL6200 emitter at I_F = 400 mA

Key Applications:

- LCD universal IR shutter glasses used with 3D-ready TV sets

The Perspective:

Despite efforts to standardize the technology used to synchronize the 3D TVs with their corresponding active shutter glasses, the industry is far from this goal, and there exist a large number of incompatible infrared and RF protocols from various manufacturers. The lack of a standard has led to the development of a market for “universal 3D TV eyewear,” capable of functioning with any 3D TV using active eyewear technology.

Vishay’s new TSMP6000 and TSMP77000 surface-mount IR receivers are designed to receive, amplify and condition all infrared signals in the 20 kHz to 60 kHz region at any wavelength between 800 nm and 1000 nm. These highly sensitive devices greatly aid the design of universal IR glasses by integrating a photodiode, amplifier, and signal shaping IC into one miniature package while the devices’ ultra-low current consumption maximizes battery life.

Availability: Samples of the new TSMP6000 and TSMP77000 are available now. Production orders have a lead time of 6 to 8 weeks.

To access the product datasheets on the Vishay Web site, go to

<http://www.vishay.com/doc?82451> (TSMP6000)

<http://www.vishay.com/doc?82478> (TSMP77000)

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