



## INFRARED EMITTERS

940-nm High-Speed, High-Power



### High Radiant Intensity, Tight Angular Distribution of Emitted Light and Power

#### FEATURES

- Radiant intensity up to 65 mW/sr
- Optical power of 40 mW at 100 mA
- Switching time of 15 ns

#### BENEFITS

- Reduce the number of emitters required to produce equal or greater optical power
- Capable of supporting up to 16 Mbit/s data communication
- Automotive AEC-Q101 qualified

#### APPLICATIONS

- Infrared remote control for digital cameras, notebook PCs, and MP3/video players
- Data and audio transmission
- In-car entertainment systems
- Light barrier or interrupter applications

Datasheets are available on our web site at [www.vishay.com](http://www.vishay.com)  
<http://www.vishay.com/doc?81931>  
<http://www.vishay.com/doc?81930>  
<http://www.vishay.com/doc?81894>  
<http://www.vishay.com/doc?81933>



# Infrared Emitters: 940-nm High-Speed, High-Power

Vishay Semiconductors

## FIVE PACKAGES

### 3-mm T1

Represents an 8 % performance improvement over the larger, 5-mm TSAL6200 in a 40 % smaller form factor

- On-axis radiant intensity of 65 mW/sr typical and optical power of 40 mW



VSLB3940

### 1.8-mm SMD

Radiant intensity of 40 mW/sr is 150 % higher than next best competing device

- Gullwing and reverse gullwing



VSMB2020X01

VSMB2000X01

### PLCC2

140 % higher at 100 mA compared to next best equivalent device

- Radiant intensity of 13 mW/sr at 100 mA and 130 mW/sr at 1 A



VSMB3940X01

### 0805

150 % higher than next best competing device

- Radiant intensity of 6 mW/sr



VSMB1940X01

## FIVE STAR PERFORMANCE

Part Number	Package	Peak Wavelength (nm)	Radiant Intensity <sup>1</sup> (mW/sr)	Optical Power <sup>1</sup> (mW)	Switching Times (ns)	Angle of Half Intensity (°)	Forward Voltage (V)	Spectral Bandwidth (nm)
VSLB3940	3-mm T1	940	65	40	15	± 22	1.35	25
VSMB2020X01	1.8-mm (T <sup>3/4</sup> ) gullwing	940	40	40	15	± 12	1.35	25
VSMB2000X01	Reverse gullwing	940	40	40	15	± 12	1.35	25
VSMB3940X01	PLCC2	940	13	40	15	± 60	1.35	25
VSMB1940X01	0805	940	6	40	15	± 60	1.35	25

<sup>1</sup> at 100 mA

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