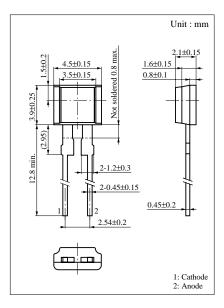
## LN145W

### GaAlAs Red Light Emitting Diode

Light source for optical fiber communications,

#### Features

- Red light emission close to monochromatic light :  $\lambda_P = 700 \text{ nm}$
- High-power output, high-efficiency
- High coupling characteristics and suits to a plastic fiber
- High-speed response : –3dB modulation of 10MHz
- Side-view flat resin package



#### Absolute Maximum Ratings ( $Ta = 25^{\circ}C$ )

Parameter	Symbol	Ratings	Unit	
Power dissipation	P <sub>D</sub>	120	mW	
Forward current (DC)	I <sub>F</sub>	40	mA	
Pulse forward current	$I_{FP}^{*}$	400	mA	
Reverse voltage (DC)	V <sub>R</sub>	3	V	
Operating ambient temperature	T <sub>opr</sub>	-25 to +85	°C	
Storage temperature	T <sub>stg</sub>	-30 to +100	°C	
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\*  $t_w = 10 \ \mu s$ , Duty cycle = 10 %

Parameter	Symbol	Conditions	min	typ	max	Unit
Radiant power	Po	$I_F = 20mA$	2.5	4		mW
Peak emission wavelength	$\lambda_{\rm P}$	$I_F = 20mA$		700		nm
Spectral half band width	Δλ	$I_F = 20 m A$		35		nm
Forward voltage (DC)	V <sub>F</sub>	$I_F = 20mA$		1.8	2.2	V
Reverse current (DC)	I <sub>R</sub>	$V_R = 3V$			100	μΑ
Half-power angle	θ	The angle in which radiant intencity is 50%		80		deg.
Response time	t <sub>r</sub> , t <sub>f</sub>	$I_{FP} = 100 \text{mA}$		30		ns
Cutoff frequency	f <sub>C</sub> *			10		MHz

#### Electro-Optical Characteristics ( $Ta = 25^{\circ}C$ )

\*Cutoff frequency  $f_C$ : Frequency at which  $10 \times \log \frac{P_O(at f = f_C)}{P_O(at f = 1MHz)} = -3$ 

[Element moisture resistance]

It is difficult to guarantee that the LN145W will meet the moisture

resistance specifications (MIL-STD-202D) which are

commonly guaranteed for semiconductors.

# ▲ Caution for Safety



### Gallium arsenide material (GaAs) is used in this product.

Therefore, do not burn, destroy, cut, crush, or chemically decompose the product, since gallium arsenide material in powder or vapor form is harmful to human health.

Observe the relevant laws and regulations when disposing of the products. Do not mix them with ordinary industrial waste or household refuse when disposing of GaAs-containing products.

### Request for your special attention and precautions in using the technical information and semiconductors described in this material

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- (5) When designing your equipment, comply with the guaranteed values, in particular those of maximum rating, the range of operating power supply voltage and heat radiation characteristics. Otherwise, we will not be liable for any defect which may arise later in your equipment.

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