# Infrared LED - Array

# ELA-920-22x60 2 6
# ELA-920-22x60 12 6*

| Color | Type | Technology | Case |
|---|---|---|---|
| Infrared | $2\varphi_{1/2}$ 20 (deg)<br>$2\varphi_{1/2}$ 120 (deg)* | GaAlAs / GaAlAs | plastic lenses,<br>metal case |

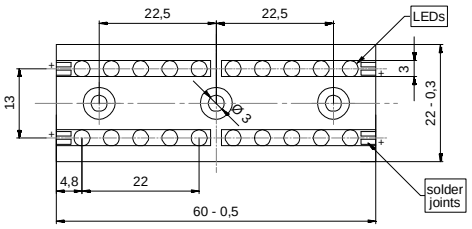
## Description

High-power IRED module includes four arrays, soldered on light metal header, each with independent power supply, comprises five IREDs connected in series, diodes fitted with plastic dome

## Applications

Illumination for CCD-cameras, alarm guard systems, target designation for night-vision systems, remote control and optical communications

## Outlines




## Maximum Ratings

$T_{amb}$ = 25°C, unless otherwise specified

| Parameter | Test Conditions | Symbol | Value | Unit |
|---|---|---|---|---|
| DC forward current | on heat sink | $I_F$ | 250 | mA |
| Peak forward current | $t_p \leq 10\mu s$, $f \leq 1kHz$ | $I_{FRM}$ | 2000 | mA |
| Operating temperature range | | $T_{amb}$ | -60 to +70 | °C |
| Storage temperature range | | $T_{stg}$ | -60 to +70 | °C |
| Power dissipation | on heat sink | P | 10 | W |
| Operating life time | ideal heat sink | t | 25.000 | h |
| Junction temperature | | $T_{jmax}$ | 100 | °C |

## Optical and Electrical Characteristics

$T_{amb}$ = 25°C, unless otherwise specified

| Parameter | Test Conditions | Symbol | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Forward voltage (5 diodes) | $I_F$ = 250mA | $V_F$ | 9,0 | 9,5 | 10 | V |
| Angle of half intensity | $I_F$ = 250mA | $2\varphi_{0,5}$ | | 20<br>120* | | deg<br>deg |
| Peak wavelength | $I_F$ = 50mA | $\lambda_p$ | 900 | 920 | | nm |
| Spectral bandwidth | $I_F$ = 250mA | $\Delta\lambda_{0,5}$ | 40 | 50 | | nm |
| Output power | $I_F$ = 100mA x 4 | $\Phi_e$ | 300 | 400 | | mW |
| Output power | $I_F$ = 250mA x 4 | $\Phi_e$ | | 1000 | | mW |
| Switching time | $I_F$ = 250mA | $t_r$, $t_f$ | 50 | 100 | 150 | ns |
| External quantum efficienty | | $\eta_E$ | 8 | 15 | | % |
| Temp. coeff. of radiant power | | $T_{K\Phi}$ | | -0,5 | | %/K |
| Temp. coeff. of wavelenght | | $T_{K\lambda}$ | | 0,25 | | %/K |
| Temp. coeff. forward voltage | | $T_{KVF}$ | | -0,2 | | %/K |
| Total capacity | $V_R$=0V | $c_t$ | 100 | 110 | | pF |


***ROITHNER LASERTECHNIK***

Schönbrunner Straße 7, A-1040 Vienna, Austria, Tel: +43-1-586 52 43-0, Fax: +43-1-586 52 43-44, office@roithner-laser.com