

# Light Emitting Diode(InGaAlP)

## KLL-3ER

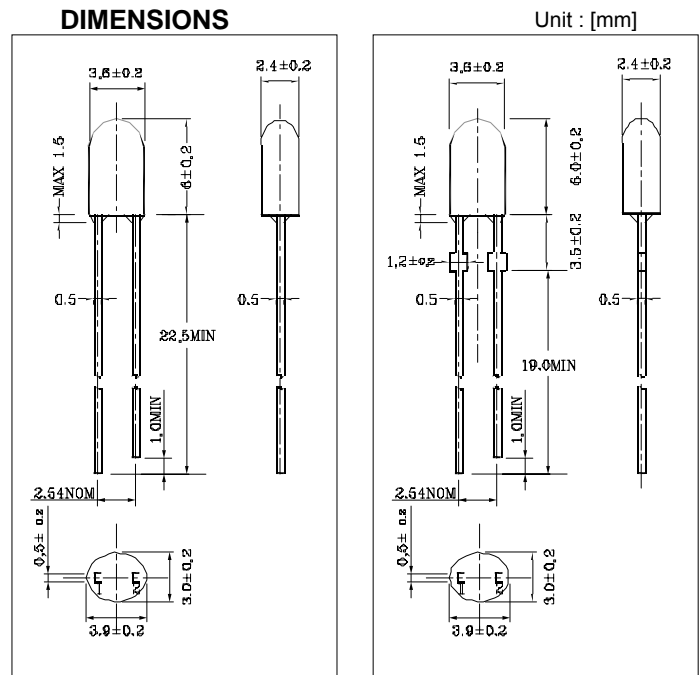
KLL-3ER is a high bright AlGaInP red LED, and has the optimized optical characteristics.

### Features

- Transparent epoxy lens
- High Optical Output

### Applications

- Display
- Indicator
- Signage



### Maximum Ratings

[ Ta=25°C ]

Parameter	Symbol	Ratings	Unit
Reverse voltage	$V_R$	5	V
Forward current	$I_F$	30	mA
Pulse forward current <sup>*1</sup>	$I_{FP}$	50	mA
Power dissipation	$P_D$	70	mW
Operating temperature	$T_{opr.}$	-30 ~ +85	°C
Storage temperature	$T_{stg.}$	-40 ~ +100	°C
Soldering Temperature <sup>*2</sup>	$T_{sol.}$	260	°C

\*1.  $I_{FP}$  Measured under duty  $\frac{1}{10}$  @ 1KHz

\*2. Soldering time  $\frac{1}{2}$  Sec

Keep the distance more than 3mm from soldering foundation.

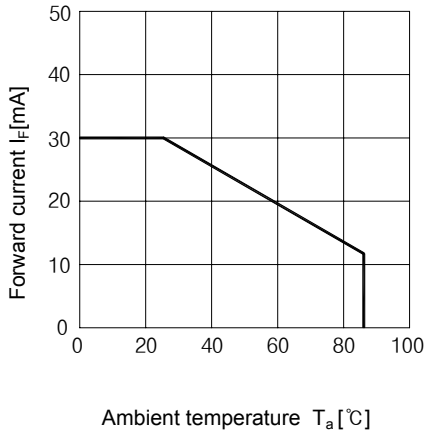
### Electro-Optical Characteristics

[ Ta=25°C ]

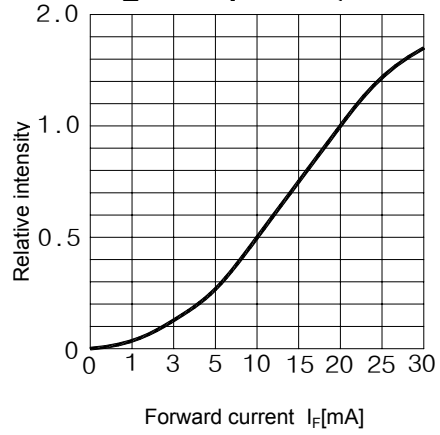
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	$V_F$	$I_F = 20 \text{ mA}$	1.9	2.1	2.3	V
Reverse current	$I_R$	$V_R = 5 \text{ V}$	-	-	10	uA
Luminous Intensity	$I_V$	$I_F = 20 \text{ mA}$	390	550	-	mcd
Peak emission wavelength	$\lambda_P$	$I_F = 20 \text{ mA}$	-	629	-	nm
Doninant Wave Length	$\lambda_d$	$I_F = 20 \text{ mA}$	620	625	630	nm
Spectral half bandwidth	$\Delta\lambda$	$I_F = 20 \text{ mA}$	-	25	-	nm
Half angle	$2\Delta\theta_{1/2}$	$I_F = 20 \text{ mA}$	-	110/50	-	deg.

**KLL-3ER**

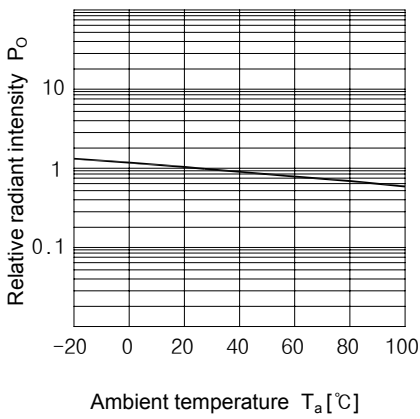
**Forward current vs.**



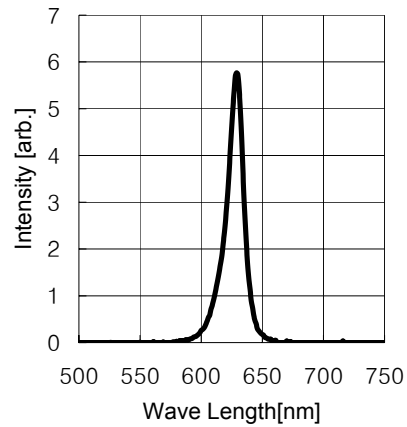
**Radiant Intensity vs.**



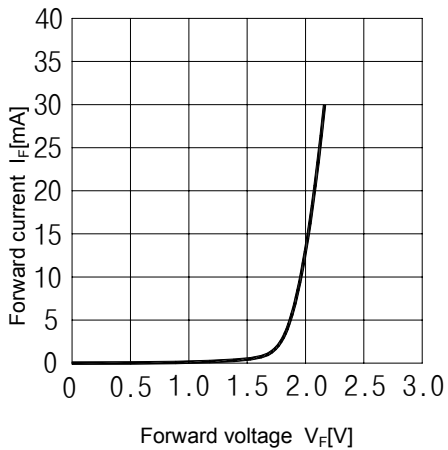
**Relative radiant intensity vs. Ambient temperature**



**Relative intensity vs. Wavelength**



**Forward current vs. Forward voltage**



**Radiant Pattern**

