

# GL-112R3 LED Array

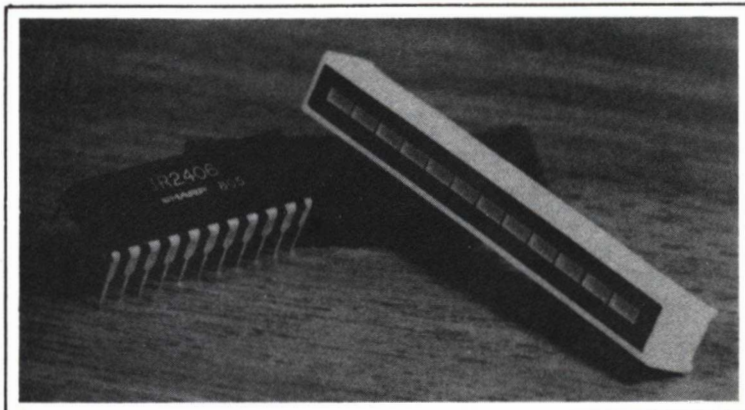
# IR-2406 LED Driver

## Description

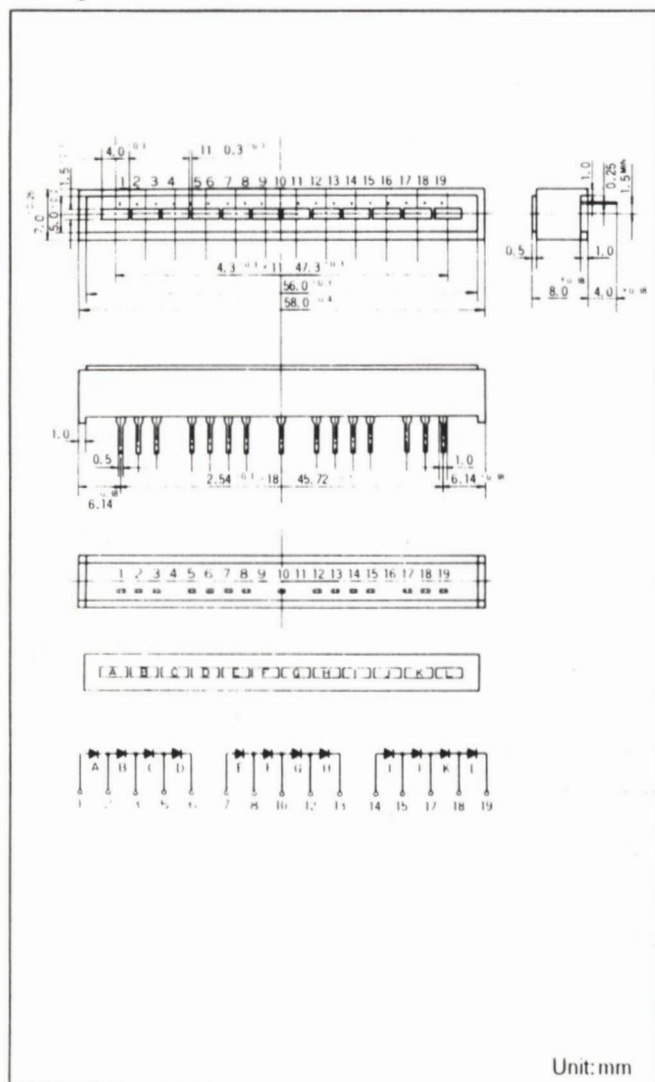
The GL-112R3 is a red LED (GaP) arranged in a 12 dot bar graph configuration. The IR-2406 is an integrated circuit LED driver with 12 outputs. Each successive output turns the LED's on in steps equal to:

$$V_{ref}(\text{Max}) - V_{ref}(\text{Min}) / 13$$

The combination of the GL-112R3 and IR-2406 can be used for linear level indicators or with a logarithmic converter added to the IR-2406 for logarithmic level indications.



## Package Dimensions



## Absolute Maximum Ratings (Ta=25°C)

Ratings	Symbol	Value	Units
Power Dissipation	P	25	mW
Continuous Forward Current	I <sub>F</sub>	10	mA
Forward Current Derating Factor		0.18	mA/°C
Reverse Voltage	V <sub>R</sub>	5	V
Operating Temperature	T <sub>opr</sub>	-20~+70	°C
Storage Temperature	T <sub>stg</sub>	-20~+80	°C

## Electro-Optical Characteristics (Ta=25°C)

Characteristics	Symbol	Min.	Typ.	Max.	Units	Condition
Forward Voltage	V <sub>F</sub>	-	1.85	2.5	V	I <sub>F</sub> =5mA
Reverse Current	I <sub>R</sub>	-	-	100	μA	V <sub>R</sub> =3V
Terminal Capacitance	C <sub>t</sub>	-	80	-	pF	V=0V f=1MHz
Luminous Intensity	I <sub>V</sub>	0.15	0.30	-	mcd	I <sub>F</sub> =5mA
Peak Emission Wavelength	λ <sub>p</sub>	-	695	-	nm	I <sub>F</sub> =5mA
Spectral Radiation Bandwidth	Δλ	-	100	-	nm	I <sub>F</sub> =5mA

## Pin Configuration

Pin No.	Function	Pin No.	Function
1	Dot A Anode	11	No Pin
2	Dot B Anode	12	Dot H Anode
3	Dot C Anode	13	Dot H Cathode
4	No Pin	14	Dot I Anode
5	Dot D Anode	15	Dot J Anode
6	Dot D Cathode	16	No Pin
7	Dot E Anode	17	Dot K Anode
8	Dot F Anode	18	Dot L Anode
9	No Pin	19	Dot L Cathode
10	Dot G Anode		



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# IR-2406 LED DRIVER

## Absolute Maximum Ratings

Ratings	Symbol		
Supply Voltage	V <sub>CC</sub>	18	V
Input Voltage	V <sub>3</sub>	V <sub>CC</sub>	V
	V <sub>20</sub>		
	V <sub>21</sub>		
Collector Power Dissipation*	P <sub>c</sub>	650	mW
Operating Temperature	T <sub>opr</sub>	-20~+75	°C
Storage Temperature	T <sub>stg</sub>	-25~+100	°C

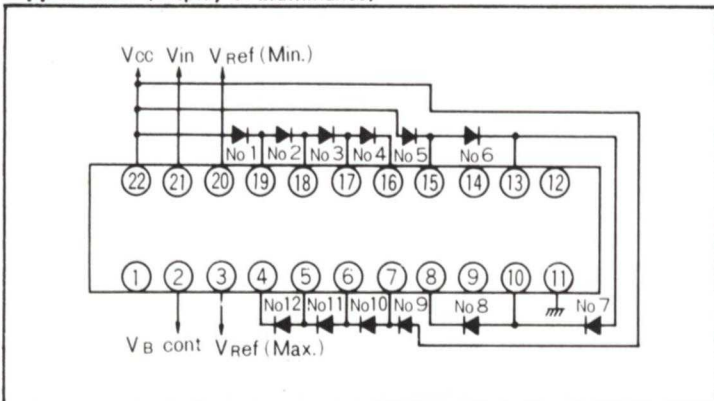
\* Ambient temperature: 25°C, Derating factor: 6.5mW/°C

## Electrical Characteristics (V<sub>CC</sub>=12V, T<sub>a</sub>=25°C)

Characteristics	Symbol	Min.	Typ.	Max.	Units
Supply Current	I <sub>22</sub>	-	5.5	8.2	mA
Input Current*	I <sub>3</sub>	-	0.3	1	μA
	I <sub>20</sub>	-			
	I <sub>21</sub>	-			
Output Current	I <sub>D</sub>	-	10	-	mA

\* Condition: V<sub>3</sub>-V<sub>20</sub><2V

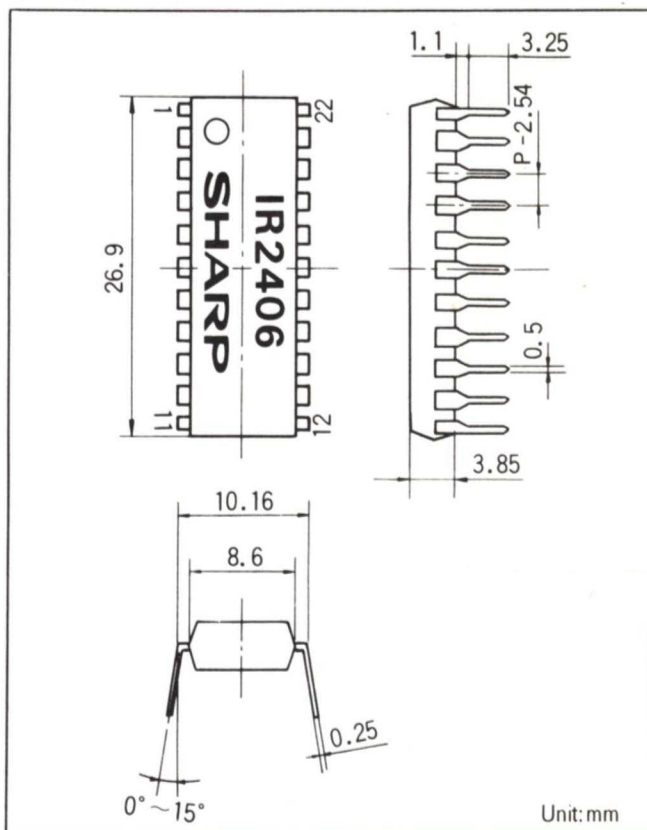
## Application (Display of Illuminance)



$$\Delta V_{in} = \{V_{ref} (Max.) - V_{ref} (Min.)\} / 13$$

ΔVin: Voltage to light a LED by turns.

## Package Dimensions



## Pin Configuration

Pin No.	Function	Pin No.	Function
1	N C	22	V <sub>CC</sub>
2	V <sub>B cont.</sub>	21	V <sub>in</sub>
3	V <sub>Ref max.</sub>	20	V <sub>Ref min.</sub>
4	Output 12	19	Output 1
5	Output 11	18	Output 2
6	Output 10	17	Output 3
7	Output 9	16	Output 4
8	Output 8	15	Output 5
9	N C	14	N C
10	Output 7	13	Output 6
11	G N D	12	N C

## OEM PRICING

LED Array and Driver	1-24	25 up	100 up	1000 up
GL-112R3	\$6.00	\$4.90	\$4.00	\$3.60
IR-2406	\$5.40	\$4.50	\$3.60	\$3.20

Sockets	1-24	25 up	100 up	1000 up
A20STL-T	.71	.67	.58	.49
A22ZT	.33	.32	.30	.27