

### Electro-Optical Characteristics :

 $I_F @ 20\text{mA}, T_a 25^\circ\text{C}$ 

Code for Parts	Lighting Color	Material	V <sub>F</sub> (V)		λ (nm)			I <sub>v</sub> <sup>*</sup> (mcd)
			typ.	max.	λ <sub>D</sub>	λ <sub>P</sub>	Δλ	typ.
MLM-190PG	Pure Green	GaP	2.2	2.6	563	557	24	4.0
MLM-190UG	Super Green	GaP	2.2	2.6	567	565	24	11
MLM-190G	Green	GaP	2.2	2.6	567	565	26	8.0
MLM-190YG	Yellow Green	GaP	2.2	2.6	572	570	30	13
MLM-190Y	Yellow	GaAsP	2.1	2.6	590	589	40	8.0
MLM-190D	Amber	GaAsP	2.1	2.6	606	610	40	7.0
MLM-190SD	Super Bright Orange	GaAsP	2.1	2.6	632	642	40	13
MLM-190UR	Super Bright Red	AlGaAs	1.9	2.6	643	660	20	20
MLM-190HR	High Bright Red	AlGaAs	1.9	2.6	643	660	20	28
MLM-190R	Red	GaP	2.2	2.6	643	700	100	2.7

\*NIST standards

### Absolute Maximum Ratings :

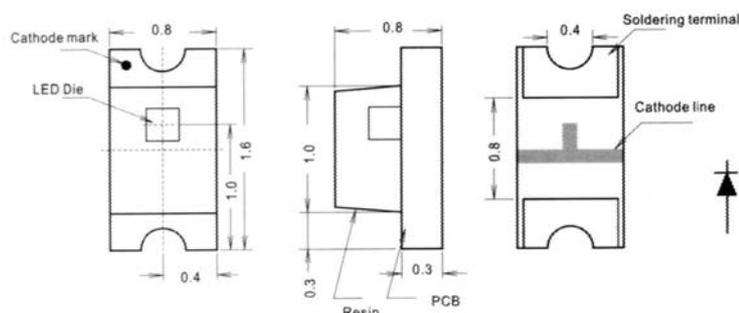
 $(T_a = 25^\circ\text{C})$ 

Series	P <sub>d</sub> (mW)	I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	T <sub>OP</sub> (°C)	T <sub>ST</sub> (°C)
MLM-190 Series	65	25	100**	5	-30 to +80	-40 to +85
MLM-190 UR/HR	78	30				

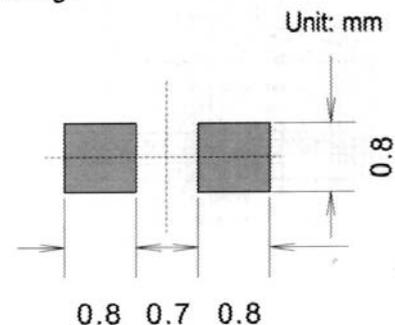
\*\*Condition for I<sub>FP</sub> is pulse of 1/10 duty and 0.1msec width

### Package Outline Dimensions :

Unit: mm Tolerance: +/-0.1



• Recommended Soldering Pattern for Reflow Soldering :



- Soldering terminal may shift in x, y direction.
- Polarity referring onto the cathode mark / line is reversed on the UR/HR.

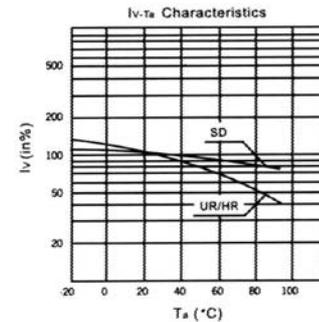
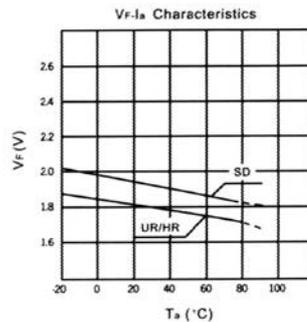
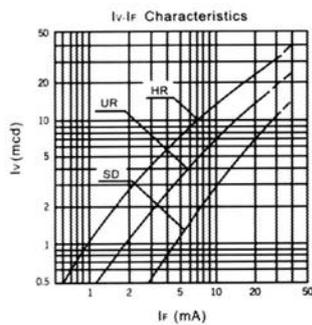
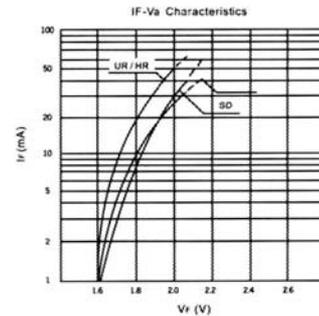
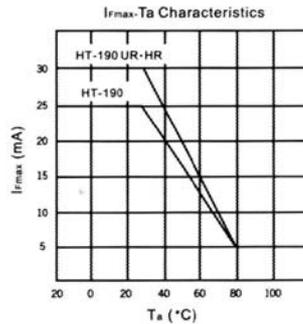
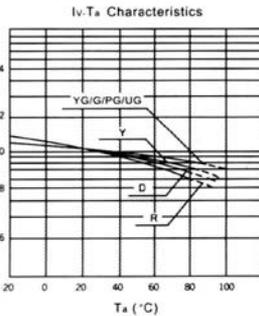
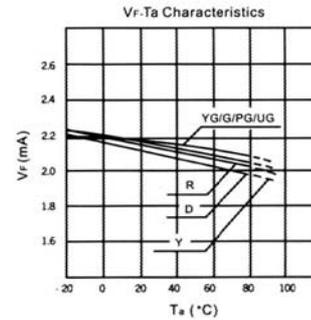
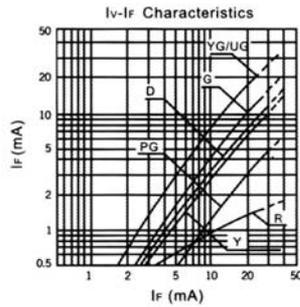
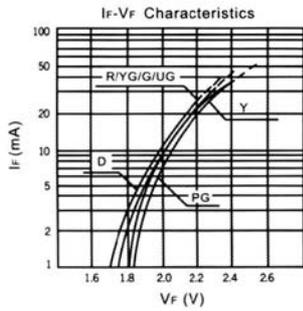

**MICRO ELECTRONICS LTD.**

G/F, 38 Hung To Road, Kwun Tong, Kowloon, Hong Kong.

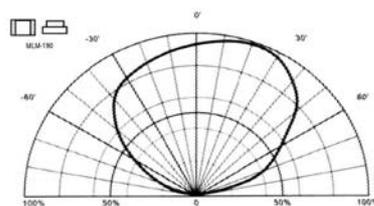
Kwun Tong P.O. BOX 69477, Hong Kong. TEL: (852) 23430181 FAX: (852) 23410321

HOMEPAGE: <http://www.microelectr.com.hk> E-MAIL ADDRESS: [common@microelectr.com.hk](mailto:common@microelectr.com.hk)

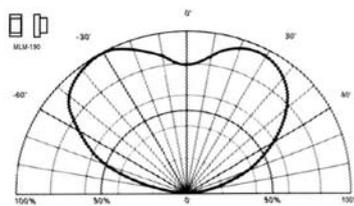
### Characteristics of MLM-190 Series :



Directive Characteristics



Directive Characteristics



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Kwun Tong P.O. BOX 69477, Hong Kong. TEL: (852) 23430181 FAX: (852) 23410321

HOME PAGE: <http://www.microelectr.com.hk> E-MAIL ADDRESS: [common@microelectr.com.hk](mailto:common@microelectr.com.hk)