

# SUPER BRIGHT LED LIGHT BAR MODULE

Stanley's MU series of super-bright LED light bar modules can be selected from a wide variety of configurations and colors to suit a broad range of requirements. By using front mask patterns, including letters, numerals and even graphics, this series is usable for a myriad of display applications.

## DESCRIPTION ON TYPE NO.

# MU 02 - 2201

Shape Code      Emitted color      Suffix  
 2.Red   3.Orange   4.Yellow   5.Green / Pure Green

## CHARACTERISTICS BY COLOR



Ta=25°C

Type No.	Material Emitted Color	Absolute Maximum Ratings						Electro-Optical Characteristics								
		Forward Current	Peak Forward Current	Reverse Current	Operating Temperature	Storage Temperature	Wavelength	Forward Voltage V <sub>f</sub>			Reverse Current I <sub>r</sub>			Peak Wavelength λ <sub>p</sub>	Viewing Angle	
		I <sub>F</sub> (mA)	I <sub>FM</sub> (mA)	I <sub>R</sub> (mA)	Top (°C)	Top (°C)	λ <sub>p</sub> (nm)	TYP	MAX	λ	MAX	V <sub>R</sub>	TYP	λ <sub>p</sub> (nm)	°	
2□□□	GaAlAs (Red)	30	60	4	-40~+85	-40~+85	0.40	1.7	2.0	20	100	4	660	30	20	
3□□□	GaAsP/GaP (Orange)	25	60	4	-40~+85	-40~+85	0.33	2.2	2.5	20	100	4	605	30	20	
4□□□	GaP (Yellow)	30	60	4	-40~+85	-40~+85	0.40	2.1	2.5	20	100	4	570	30	20	
5□□1	GaP (Green)	25	60	4	-40~+85	-40~+85	0.33	2.2	2.5	20	100	4	555	30	20	
5□□2	GaP (Green)	30	60	4	-40~+85	-40~+85	0.67	2.1	2.5	20	100	4	560	30	20	
5□□5	GaP (Pure Green)	25	60	4	-40~+85	-40~+85	0.33	2.2	2.5	20	100	4	555	30	20	
9□□1	GaAlAs (Red)	30	60	4	-40~+85	-40~+85	0.40	1.7	2.0	20	100	4	660	30	20	
	GaP (Green)	25	60	4	-40~+85	-40~+85	0.33	2.2	2.5	20	100	4	555	30	20	
9□□2	GaAlAs (Red)	30	60	4	-40~+85	-40~+85	0.40	1.7	2.0	20	100	4	660	30	20	
	GaP (Yellow)	30	60	4	-40~+85	-40~+85	0.40	2.1	2.5	20	100	4	570	30	20	
9□□3	GaAlAs (Red)	30	60	4	-40~+85	-40~+85	0.40	1.7	2.0	20	100	4	660	30	20	
	GaAsP/GaP (Orange)	25	60	4	-40~+85	-40~+85	0.33	2.2	2.5	20	100	4	605	30	20	

- \*1: MU91, MU92 and MU93 series are all 30 mA.
- \*2:  $t_w \leq 2$  msec,  $duty \leq 1/5$ . However, for the MU91, MU92 and MU93 series, 300 mA for red and 100 mA for yellow, orange and pure green ( $t_w \leq 1$  msec,  $duty \leq 1/20$ ).
- \*3: For MU91, MU92 and MU93 series, the temperature range is -30°C to +85°C.

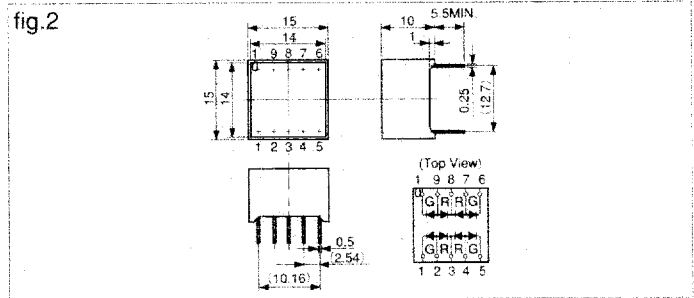
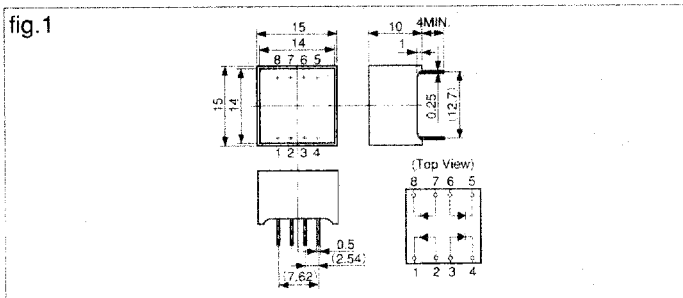
## CHARACTERISTICS BY SHAPE

Ta=25°C

Shape	Type Number	Emitted Color	Resin Color	Light Emitting Surface (Outer size)	Wavelength	Absolute Maximum Rating		Electro-Optical Characteristics			Fig.				
						Power Dissipation P <sub>d</sub>	MIN	TYP	λ <sub>p</sub>						
	MU02-2201	Red	Red	14×14 (15×15)	4	240	20	42	20	1					
	MU02-2205		Milky White												
	MU02-3201	Orange	Yellow								4	250	10	20	20
	MU02-3205	Milky White													
	MU02-4201	Yellow	Green								4	300	20	42	20
	MU02-4205	Milky White													
	MU02-5201	Pure Green	Green								4	250	10	20	20
	MU02-5202	Green													
	MU02-5205	Milky White													
	MU02-9301	Red	Green								4	240	8	12	20
Pure Green															
	MU03-2250	Red	Red	6×9 (7×10)	1	60	5	10	20	3					
	MU03-2201		Red												
	MU03-2205	Milky White													
	MU03-3201	Orange	Yellow								2	125	5	10	20
	MU03-3205	Milky White													
	MU03-4201	Yellow	Green								2	150	10	20	20
	MU03-4205	Milky White													
	MU03-5201	Pure Green	Green								2	125	5	10	20
	MU03-5202	Green													
	MU03-5205	Milky White													
	MU03-9201	Red	Milky White								1	60	5	10	20
		Pure Green													

## PACKAGE DIMENSIONS Unit : mm


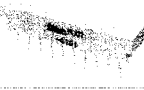


Tolerance : ±0.25mm





## ▼CHARACTERISTICS BY SHAPE

Ta=25°C

Shape	Type Number	Emitting Color	Resin Color	Light Emitting Surface (Outer size)	Number of pins	Absolute Maximum Rating		Electro-Optical Characteristics			fig.
						Power Dissipation Pd		Luminous Intensity Iv			
								MIN.	TYP.	IF	
	MU04-2101	Red	Red	6×19 (7×20)	3	180	15	32	20	4	
	MU04-2105		Milky White		3	180	15	32	20		
	MU04-3101	Orange	Orange		3	190	8	16	20		
	MU04-3105		Milky White		3	190	8	16	20		
	MU04-4101	Yellow	Yellow		3	225	15	32	20		
	MU04-4105		Milky White		3	225	15	32	20		
	MU04-5101	Pure Green	Green		3	190	8	16	20		
	MU04-5102	Green	Green		3	225	10	20	20		
MU04-5105	Pure Green	Milky White	3	190	8	16	20				
	MU07-2101	Red	Red	6×29 (7×30)	5	300	20	40	20	5	
	MU07-3101	Orange	Orange		5	320	10	20	20		
	MU07-4101	Yellow	Yellow		5	375	20	40	20		
	MU07-5101	Pure Green	Green		5	320	10	20	20		
	MU08-2201	Red	Red	14×16 (15×17)	4	240	20	40	20	6	
	MU08-3201	Orange	Orange		4	250	10	20	20		
	MU08-4201	Yellow	Yellow		4	300	20	40	20		
	MU08-5201	Pure Green	Green		4	250	10	20	20		
	MU08-9301	Red	Green		4	240	8	12	20		
	Pure Green	4		250	8	12	20				
	MU09-9101	Red	Milky White	φ 6.4 (φ 7)	1	60	4	8	20	8	
		Pure Green			2	125	4	6	20		
	MU09-9102	Red	Milky White		1	60	4	8	20		
		Yellow			2	150	6	12	20		
		Red			1	60	4	8	20		
MU09-9103	Orange	Milky White	2	125	4	8	20				

Unit

mm

pcs

mW

mcd

mA

## ▼PACKAGE DIMENSIONS Unit : mm

Tolerance : ±0.25mm

