

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, numbers and even graphics, this series is usable for a myriad of display applications.

Description of Part Number

MU 02 - 2201

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

Characteristics by Color

Ta=25°C

Part No.	Material Emitted Color	Absolute Maximum Ratings						Electro-Optical Characteristics							
		Forward Current	Peak Forward Current	Reverse Voltage	Operating Temperature	Storage Temperature	Derating	Forward Voltage			Reverse Current		Peak I _p TYP.	Wavelength Spectral Line Half Width DI TYP	IF
		IF ÷ 1	IFM ÷ 2	VR	T _{opr} ÷ 3	T _{stg} ÷ 4	DI ÷ F	TYP.	MAX.	IF	MAX.	VR			
2□□□	GaAlAs (Red)	30	60	4	-40~+85	-40~+85	0.40	1.7	2.0	20	20	4	660	30	2.0
3□□□	GaAsP (Orange)	25	60	4	-40~+85	-40~+85	0.33	2.2	2.5	20	20	4	605	30	2.0
4□□□	GaP (Yellow)	30	60	4	-40~+85	-40~+85	0.40	2.1	2.5	20	20	4	570	30	2.0
5□□1	GaP (Green)	25	60	4	-40~+85	-40~+85	0.33	2.2	2.5	20	20	4	555	30	2.0
5□□2	GaP (Green)	30	60	4	-40~+85	-40~+85	0.40	2.1	2.5	20	20	4	560	30	2.0
5□□5	GaP (Pure Green)	25	60	4	-40~+85	-40~+85	0.33	2.2	2.5	20	20	4	555	30	2.0
9□□1	GaAlAs (Red)	30	60	4	-40~+85	-40~+85	0.40	1.7	2.0	20	20	4	660	30	2.0
	GaP (Green)	25	60	4	-40~+85	-40~+85	0.33	2.2	2.5	20	20	4	555	30	2.0
9□□2	GaAlAs (Red)	30	60	4	-40~+85	-40~+85	0.40	1.7	2.0	20	20	4	660	30	2.0
	GaP (Yellow)	30	60	4	-40~+85	-40~+85	0.40	2.1	2.5	20	20	4	570	30	2.0
9□□3	GaAlAs (Red)	30	60	4	-40~+85	-40~+85	0.40	1.7	2.0	20	20	4	660	30	2.0
	GaAsP (Orange)	25	60	4	-40~+85	-40~+85	0.33	2.2	2.5	20	20	4	605	30	2.0
Units		mA	mA	V	°C	°C	mA/°C	V	mA	mA	V	V	nm	nm	mA

÷ 1 : MU91, MU92 and MU93 series are all 30 mA.

÷ 2 : tw 1/5 msec, duty 1/5 However, for the MU91, MU92 and MU93 series, 300 mA for red and 100 mA for yellow, orange and pure green (tw 1 msec, duty 1/20)

÷ 3 ÷ 4 : For MU91, MU92 and MU93 series, the temperature range is -30°C to +85°C.

Characteristics by Shape

Ta=25°C

Shape	Part No.	Emitted Color	Resin Color	Light Emitting Surface (Outer Size)	No. of Chips	Absolute Max. Rating	Electro-Optical Characteristics			fig.			
						Power Dissipation Pd	Luminous Intensity Iv						
							MIN.	TYP.	IF				
	MU02-2201	Red	Red	14 x 14 (15 x 15)	4	240	20	42	20	1			
	MU02-2205		Milky White		4	240	20	42	20				
	MU02-3201	Orange	Orange		4	250	10	20	20				
	MU02-3205		Milky White		4	250	10	20	20				
	MU02-4201	Yellow	Yellow		4	300	20	42	20				
	MU02-4205		Milky White		4	300	20	42	20				
	MU02-5201	Pure Green	Green		4	250	10	20	20				
	MU02-5202	Green	Green		4	300	15	32	20				
	MU02-5205	Pure Green	Milky White		4	250	10	20	20				
	MU02-9301	Red	Green		4	240	8	12	20		2		
		Pure Green			4	250	8	12	20				
		MU03-2201	Red		Red	6 x 9 (7 x 10)	2	120	10	20	20	3	
MU03-2205		Milky White		2	120		10	20	20				
MU03-3201		Orange	Orange	2	125		5	10	20				
MU03-3205			Milky White	2	125		5	10	20				
MU03-4201		Yellow	Yellow	2	150		10	20	20				
MU03-4205			Milky White	2	150		10	20	20				
MU03-5201		Pure Green	Green	2	125		3	7	20				
MU03-5202		Green	Green	2	150		8	16	20				
MU03-5205		Pure Green	Milky White	2	125		5	10	20				
MU03-9201		Red	Milky White	1	60		5	7	20				
		Pure Green		1	62.5		3	4	20				
Units				mm	pcs		mW	mcd		mA			

Package Dimensions

unit : mm

Tolerance : ±0.25mm

fig.1

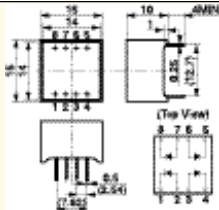
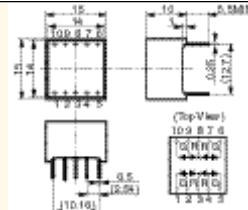


fig.2



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

unit : mm

fig.3

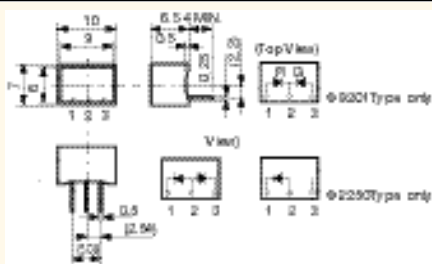


fig.4

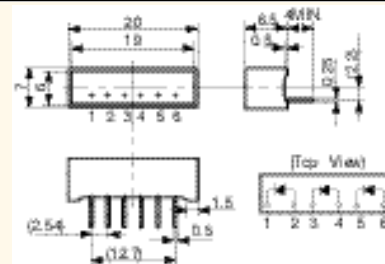


fig.5

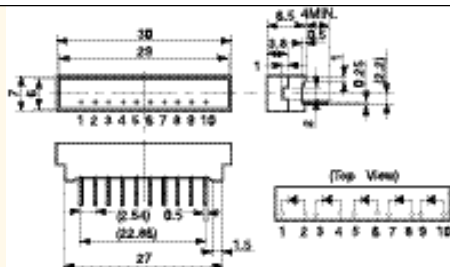


fig.6

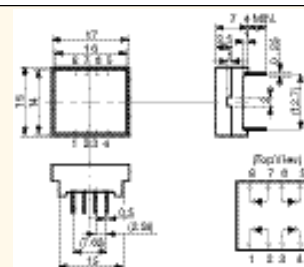
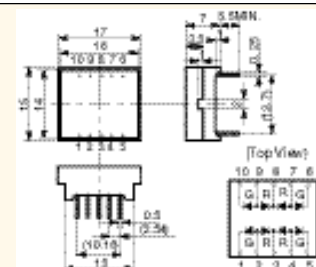


fig.7



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Characteristics by Shape

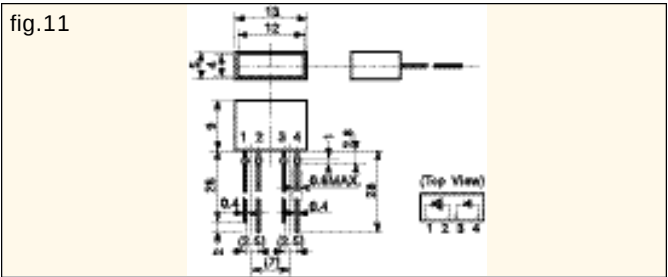
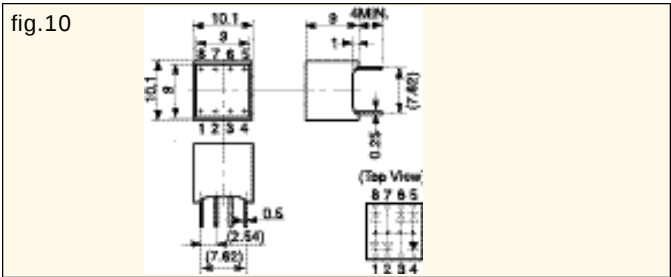
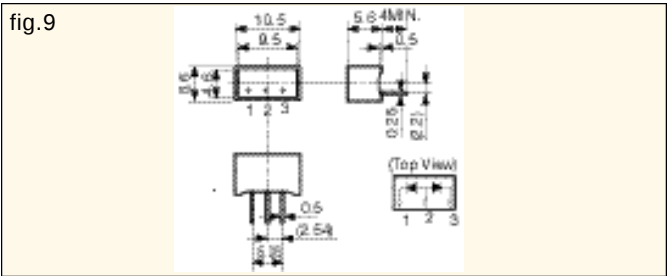
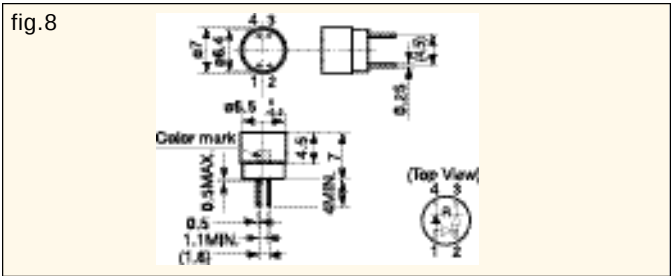
Ta=25°C

Shape	Part No.	Emitted Color	Resin Color	Light Emitting Surface (Outer Size)	No. of Chips	Absolute Max. Rating	Electro-Optical Characteristics			fig.
						Power Dissipation Pd	Luminous Intensity		Iv	
							MIN.	TYP.	If	
	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	
	MU09-9103	Red	Milky White		1	60	4	8	20	
		Orange			2	125	4	8	20	
	MU11-2201	Red	Red	4.6X9.5 (5.6X10.5)	2	120	10	20	20	9
	MU11-3201	Orange	Orange		2	125	5	10	20	
	MU11-4201	Yellow	Yellow		2	150	10	20	20	
	MU11-5201	Pure Green	Green		2	125	5	10	20	
	MU13-9101	Red	Milky White	9X9 (10.1X10.1)	1	60	6	12	20	10
		Pure Green			5	310	7	14	20	
	MU13-9102	Red	Milky White		1	60	6	12	20	
		Yellow			5	375	20	40	20	
	MU16-2101	Red	Red	4X12 (5X13)	2	120	8	16	20	11
	MU16-2105		Milky White		2	120	8	16	20	
	MU16-3101	Orange	Orange		2	125	6	12	20	
			Milky White		2	125	6	12	20	
	MU16-4101	Yellow	Yellow		2	150	8	16	20	
			Milky White		2	150	8	16	20	
	MU16-5101	Pure Green	Green		2	125	4	8	20	
			Milky White		2	125	4	8	20	
	MU17-2101	Red	Red	4X19 (5X20)	3	180	12	24	20	12
	MU17-2105		Milky White		3	180	12	24	20	
	MU17-3101	Orange	Orange		3	190	9	18	20	
			Milky White		3	190	9	18	20	
	MU17-4101	Yellow	Yellow		3	225	12	24	20	
			Milky White		3	225	12	24	20	
	MU17-5101	Pure Green	Green		3	190	5	10	20	
			Milky White		3	190	5	10	20	
Units				mm	pcs	mW	mcd		mA	

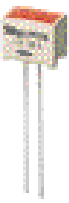
Package Dimensions

unit : mm

Tolerance : ±0.25mm



■ Characteristics by Shape

Shape	Part No.	Emitted Color	Resin Color	Light Emitting Surface (Outer Size)	No. of Chips	Absolute Max. Rating	Electro-Optical Characteristics			fig.
						Power Dissipation Pd	Luminous Intensity Iv			
							MIN.	TYP.	IF	
	MU20-2101	Red	Red	5X9 (6X10)	1	60	4	8	20	13
	MU20-2105		Milky White		1	60	4	8	20	
	MU20-3101	Orange	Orange		1	62.50	3	6	20	
	MU20-3105		Milky White		1	62.50	3	6	20	
	MU20-4101	Yellow	Yellow		1	75	4	8	20	
	MU20-4105		Milky White		1	75	4	8	20	
	MU20-5101	Pure Green	Green		1	62.50	2	4	20	
	MU20-5105		Milky White		1	62.50	2	4	20	
	MU91-2001	Red	Red	6X6 (6X6)	1	60	3	6	20	14
	MU91-3001	Orange	Orange		1	75	3	6	20	
	MU91-4001	Yellow	Yellow		1	75	3	6	20	
	MU91-5001	Pure Green	Green		1	75	1.2	2.4	20	
	MU92-2001	Red	Red	9X5 (9X5)	1	60	3	6	20	15
	MU92-3001	Orange	Orange		1	75	3	6	20	
	MU92-4001	Yellow	Yellow		1	75	3	6	20	
	MU92-5001	Pure Green	Green		1	75	1.2	2.4	20	
	MU93-2001	Red	Red	10X10 (10X10)	1	60	4	8	20	16
	MU93-3001	Orange	Orange		1	75	4	8	20	
	MU93-4001	Yellow	Yellow		1	75	4	8	20	
	MU93-5001	Pure Green	Green		1	75	1.5	3	20	
Units				mm	pcs	mW	mcd		mA	

Tolerance : $\pm 0.25\text{mm}$

[illegible]