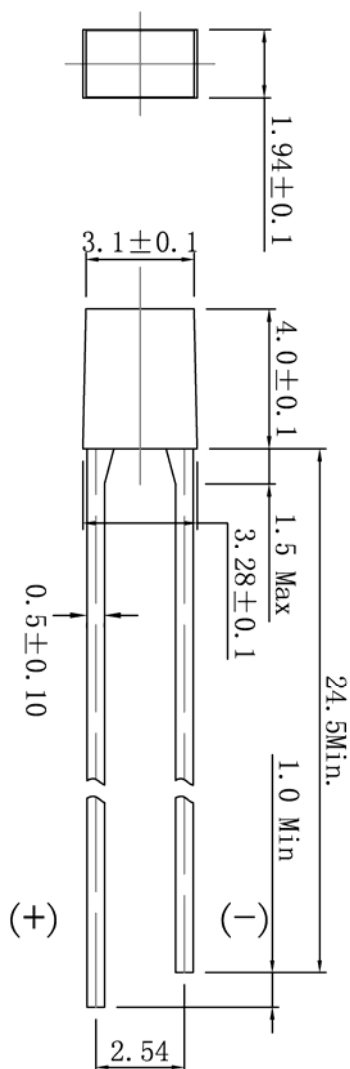


Package Dimensions

Part No. : MT-234UBC/W90/470-5



Characters

InGaN Chip
Blue
Water Clear
2x3mm Rectangular
Reliable and Rugged
Low Power Consumption
Low Working Current

Applications

Back-Lighting
Light Guide

Notes

1. All Dimensions are in millimeters
2. Tolerance is $\pm 0.25\text{mm}$ unless otherwise noted
3. Protruded resin under flange is 1.0mm max.
4. Lead measured where the leads emerge from the package
5. ESD Class (Mil-Std-883d Method 3015.7) based on Human Body Mode : -1000V (Ave.)

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I _v	Refer to Page 4			mcd	I _F = 20mA
Viewing Angle *	2θ 1/2		90		Deg.	
Dominant Wavelength	λ d	Refer to Page 5			Deg.	
Spectrum Radiation Bandwidth	Δλ		21		nm	
Forward Voltage	V _F	3.0	3.3	3.6	V	
Recommended Working Current	R _{IF}	10	15	20	mA	

* Viewing Angle is defined as the off-axis angle where the Luminous Intensity is 1/2 the peak intensity.

Absolute Maximum Ratings (Ta=25°C)

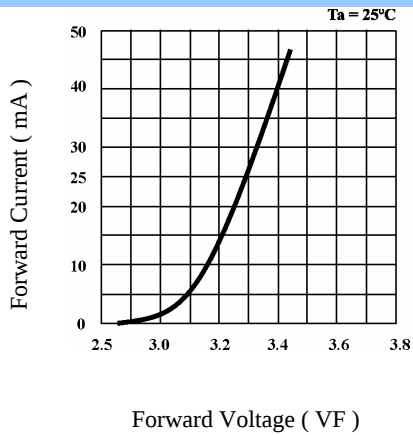
Parameter	Symbol	Max.	Unit
Power Dissipation	P _D	100	mW
DC Forward Current	I _F	30	mA
Peak Forward Current	I _{PF}	120	mA
Reverse Voltage	V _R	5	V
Reverse Current	I _R	10	uA
Operation Temperature Range	T _{opr}	+ 80 ~ - 30	Deg.
Storage Temperature Range	T _{stg}	+ 100 ~ - 40	Deg.
Soldering Temperature Range *	T _{sol}	260C for 5 Seconds	Deg.

Duty Ratio = 1/16 , Pulse width = 0.1ms

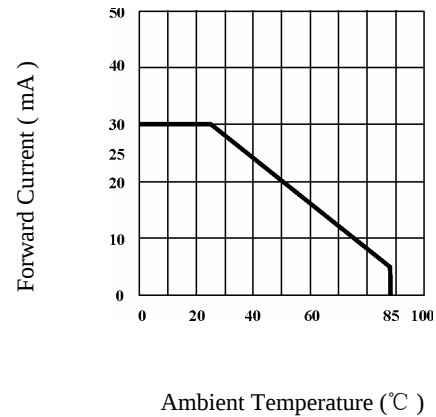
* Lead Soldering Temperature Range (1.6mm from LED Body)

Typical Electro-Optical Characteristics Curves

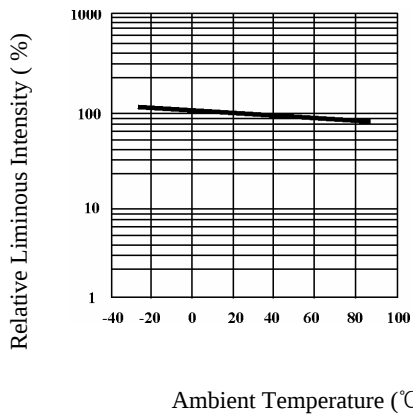
Forward Current VS Forward Voltage



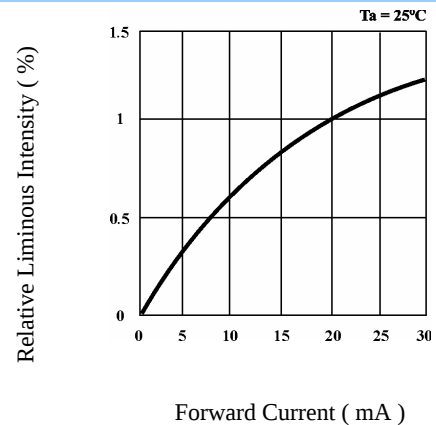
Forward Current VS Ambient Temperature



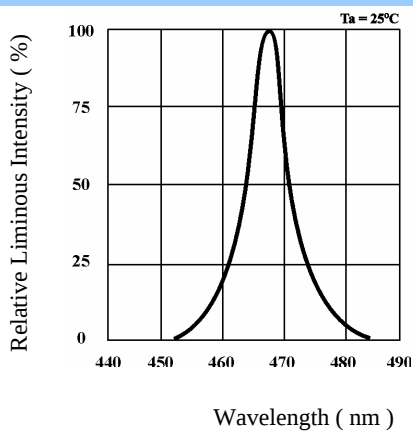
Luminous Intensity VS Ambient Temperature



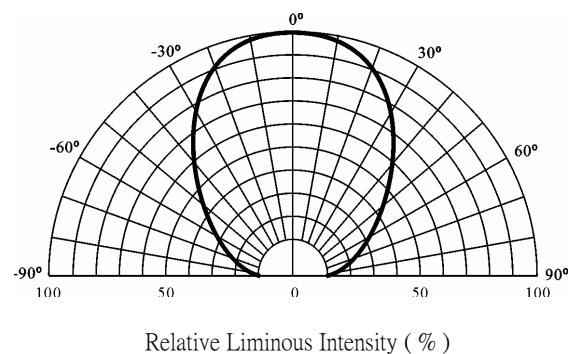
Luminous Intensity VS Forward Current



Spectrum Distribution



Viewing Angle Diagram



The Brightness (mcd) Ranking System ($I_F = 20\text{mA}$)**Normal Bright**

N1	30 - 40
N2	40 - 50
N3	50 - 70
N4	70 - 100
N5	100 - 130
N6	130 - 160
N7	160 - 200
N8	200 - 250
N9	250 - 300

Super Bright

S1	300 - 400
S2	400 - 500
S3	500 - 700
S4	700 - 1000
S5	1000 - 1300
S6	1300 - 1600
S7	1600 - 2000
S8	2000 - 2500
S9	2500 - 3000

Utral Bright

U1	3000 - 4000
U2	4000 - 5000
U3	5000 - 7000
U4	7000 - 10000
U5	10000 - 13000
U6	13000 - 16000
U7	16000 - 20000
U8	20000 - 25000
U9	25000 - 30000

eXtra Bright (cd)

X1	30 - 40
X2	40 - 50
X3	50 - 70
X4	70 - 100
X5	100 - 130
X6	130 - 160
X7	160 - 200
X8	200 - 250
X9	250 - 300

The Dominant Wavelength Ranking System ($I_F = 20\text{mA}$)**Blue**

Code	Wavelength Range
460-5	460 - 462.5 nm
	462.5 - 465 nm
465-5	465 - 467.5 nm
	467.5 - 470 nm
470-5	470 - 472.5 nm
	472.5 - 475 nm

Part Number System (Through-hole Type)**M T - 4 5 3 U Y G C / W 1 2 0 / 5 7 0 - 5 / S 1 S 2 / A 1 2 / x x x**

a	b	c	d	e	f	g	h	j	k
---	---	---	---	---	---	---	---	---	---

a	LED shape code
b	TPX mould code
c	LED leadframe code
d	Emitting color
e	Lens color
f	Viewing angle
g	Wavelength range
h	Brightness range
j	Chip code
k	Taping code / Tailer made code

Part Number System (All SMD Type)**M T - 1 9 - 2 1 U B C / W 9 0 / 4 7 0 - 5 / S 1 S 2 / B 1 3 / x x x**

a	b	c	d	e	f	g	h	j
---	---	---	---	---	---	---	---	---

a	LED shape code
b	PCB mould code
c	Emitting color
d	Lens color
e	Viewing angle
f	Wavelength range
g	Brightness range
h	Chip code
j	Taping code / Tailer made code