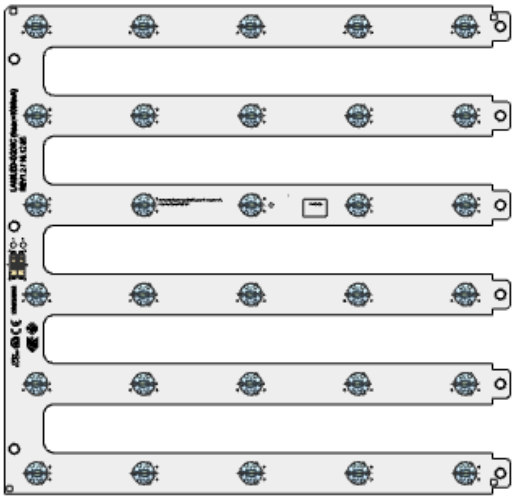
LED Module

LAM-SQ30



Features & Benefits

- Easy connection with re-workable poke-in connector
- Fit better to replace conventional T5, T8 fixture with narrow width
- Full Certifications

Applications

Indoor Lighting:

- Office / Retail / Living space
- Area Panels, Troffer and Linear Pendants
- Channel and Cove lighting

SAMSUNG

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1. Product Code Information

Nominal CCT (K)		Product Code
3000	Front CNT	SI-B8V114250WW
4000		SI-B8T114250WW
6500		SI-B8P114250WW

2. Characteristics

Item	Rating	Unit	Remark
Rated Lifetime	>50,000	hour	L70B50
Ingress Protection (IP)	no rating	-	
Ambient / Operating Temperature (t_{amb})	-20 ~ +50	℃	
Storage Temperature	-30 ~ +80	℃	

Item	Nom. CCT (K)	Rating				Remark
		Min	Typ.	Max	Unit	
Luminous Flux (Φ_v)	3000	1301	1445	1606	lm	I_f = 350 mA t_p = 50 ℃
	4000	1364	1515	1683		
	6500	1364	1515	1683		
Luminous Efficacy	3000	123	137	152	lm/W	
	4000	129	143	159		
	6500	129	143	159		
CCT	3000	2862	3007	3163	K	
	4000	3724	3914	4123		
	6500	6002	6402	6866		
Color Consistency (initial)		-	-	5	Mac Adam step	
		-	-	4		
		-	-	5		
Color Rendering Index (Ra)		80	83	-	-	
Operating Current (I_f)		-	350	540	mA	-
Operating Voltage (V_f)		27.8	30.2	32.8	Vdc	If = 350 mA tp = 50 ℃
Power Consumption		9.7	10.6	11.5	W	

Notes:

1) t_p: temperature at which performance is specified; measured at “Tc point”.

2) Samsung maintains a measurement tolerance of: Luminous flux: ±7 %, CRI: ±3.0, Voltage: ±0.3 V, Power Consumption: ±0.3W

Item	Nominal*	Life**	Max***	Unit
Temperature	50 (t_p)	80($t_{p,\ 50}$)	85(t_c)	℃

Notes:

* Temperature used to specify performance of the module (t_p).

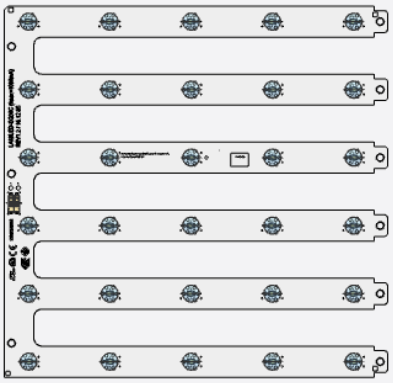
** Rated maximum performance temperature at which lifetime is specified ($t_{p,\ 50}$).

*** Rated maximum temperature, highest permissible temperature to avoid safety risk (t_c).

All temperatures are measured at the designated “Tc point” as indicated on the module.

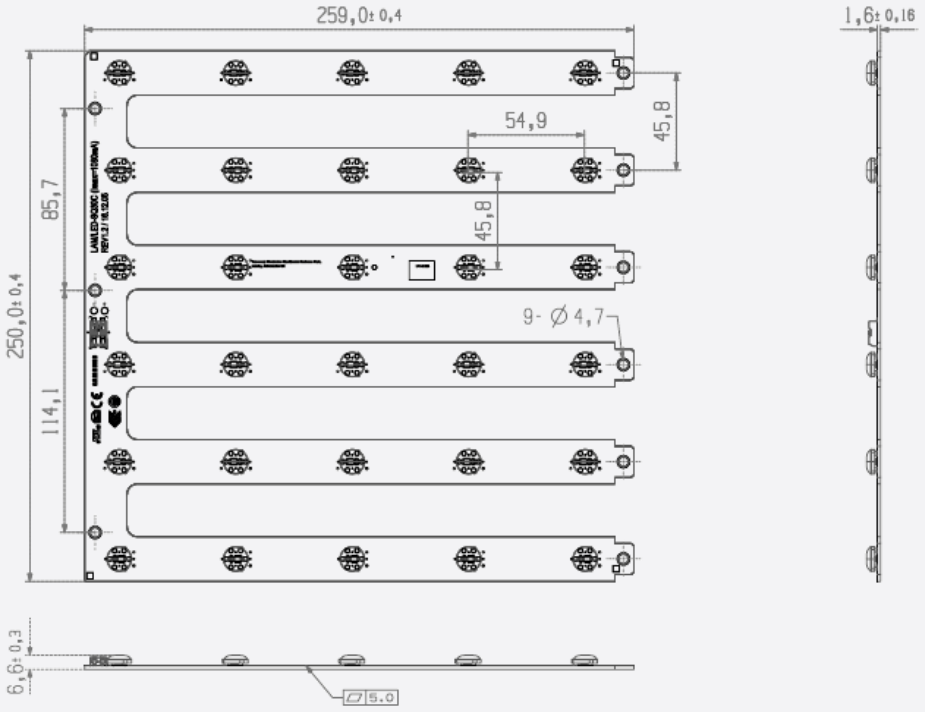
3. Structure and Assembly

a) Appearance



b) Dimension

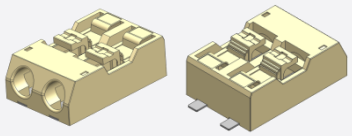
Dimension	Specification	Tolerance	Unit
Module Length	259.0	±0.4	mm
Module Width	250.0	±0.4	mm
Module Height	6.6	±0.3	mm
PCB Thickness	1.6	±0.16	mm
Module Weight	93	±4.7	g



c) Assembly

Connectors on the board are provided for easy wiring with the LED driver and between modules

[Front connector]

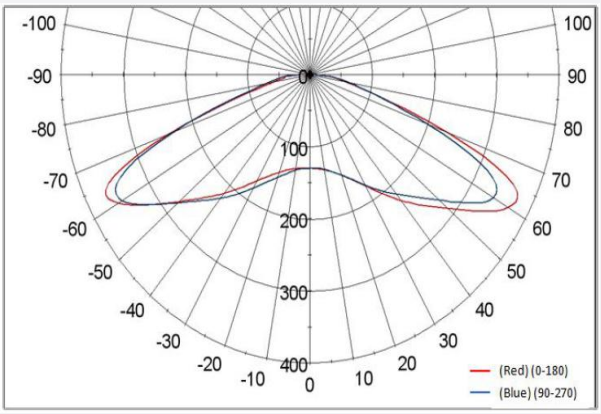


d) Structure

Item	Specification
LED	LM561B+ Middle Power LED
PCB	Material: copper, solder mask, epoxy
LENS	Dimension : Ø 11.56 x 4.99 [mm]
Connector	Reworkable poke-in connector type
Wire	24~18 AWG; terminal strip length of 7.5~8.5 mm

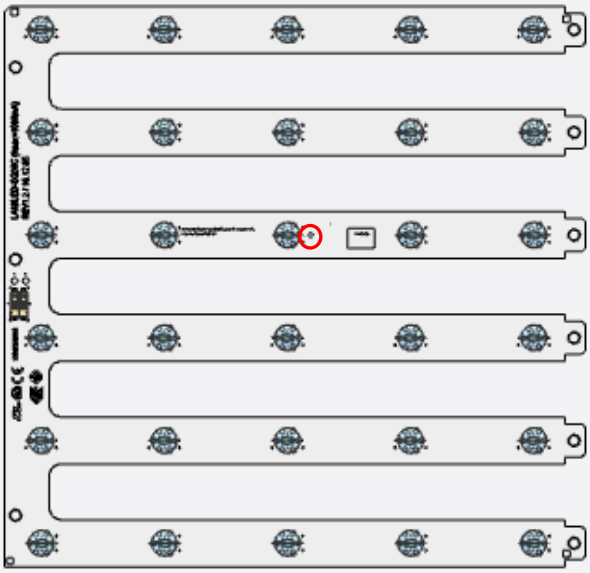
e) Light Distribution

Polar Intensity Diagram: Beam Angle 145 ± 5°

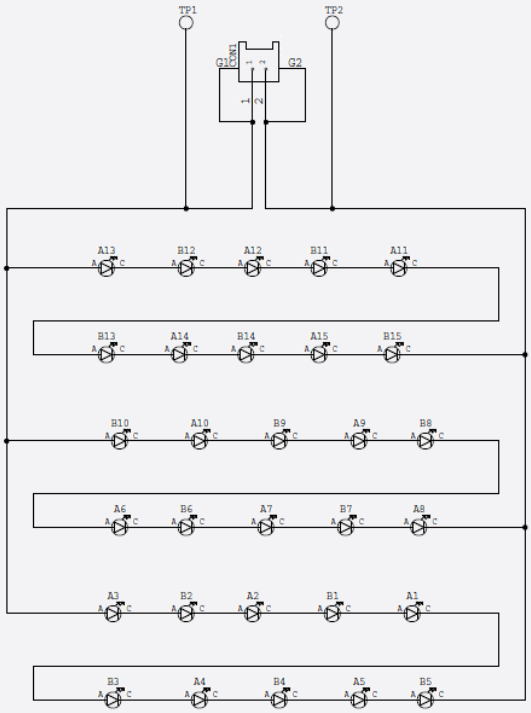


f) Thermal Management

Performance temperatures are measured on “tc point” as indicated on the module.



g) Schematic Circuit



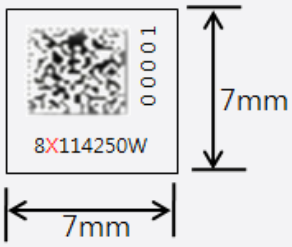
4. Certification and Declaration

Item	Compliant to	Remark
Test & Certification	CE	IEC / EN 62031, IEC / EN 62471
	ENEC	IEC / EN 62031, IEC / EN 62471
	VDE	-
	UL	-
	cUL	-
	Photo biological Safety(LM561B+ LED)	IEC / EN 62471
Declaration	RoHS	Hazardous Substance & Material
	REACH	Hazardous Substance & Material

5. Label Structure

a) Module Label

[Printing Label]



[Information of Barcode]

① Model code : SI-B8X114250WW

X : V(3000K), T(4000K), P(6500K)

② Space: Space

③ SMT date : K224 (2010-Feburary-24th)

A(2000), B(2001) · · · · · · J(2009), K(2010), L(2011), · · · · · · (year)

1(January), · · · · · · 9(September), A(October), B(November), C(December)(month)

01, 02, · · · · · · 31th (date)

④ SMT Line No. : 1 line

1~9, A(10), B(11), C(12), D(13), E(14), F(15)

⑤ Serial No. : 00001

00001~99999 : Setting "00001" every working day

⑥ Color temperature : YZ00K

YZ : 30, 40, 65

⑦ LED Maker : -S (Samsung)

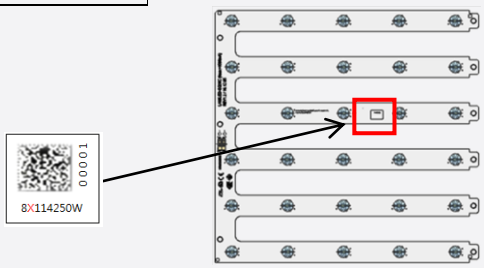
⑧ Group No. : 01 (Binning group)

[QR CODE Information]

① Example : SI-B8X114250WW_N321100001YZ00K-S01

② 34 digit : Model code(14) + Space(1) + SMT date(4) + SMT line No.(1) + Serial No.(5) + Color temperature(5) + LED maker(2) + GROUP No.(2)

Model CODE	SI-B8X114250WW
QR CODE Information	SI-B8X114250WW_N321100001YZ00K-S01



b) Box Label

- 100mm x 50mm

The lot number is composed of the following characters:

① Product code

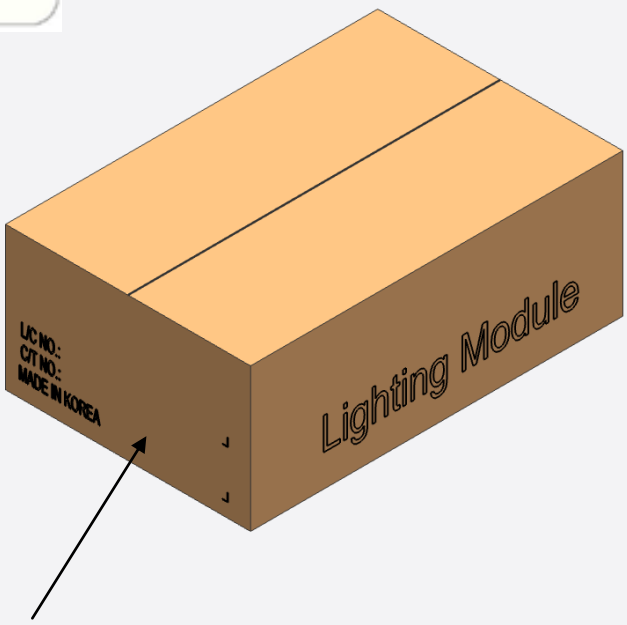
② Lot ID

③ Place of origin

④ Quantity

⑤ Describe production week

⑥ Date of Issue



6. Packing Structure

ARTICLE	TRAY	BOX	PALLET	REMARKS
Quantity	4 ea	60 ea	1080 ea	

7. Precautions in Handling & Use

A. The LED Lighting Modules for white light are devices which are materialized by combining white LEDs.
The color of white light can differ a little unusually to diffuser plate(sign-board panel).
Also when the LEDs are illuminating, operating current should be decided after considering
the ambient maximum temperature.

B. Handling
To prevent the LED Lighting Modules from making any defectives, please handle the LED Lighting
Modules with care as follows.
(1) Don't drop the unit and don't give the unit any shocks.
(2) Don't bend the PCB and don't touch the LED Resin.
(3) Don't storage the Module in a dusty place or room.
(4) Don't take the product apart.
(5) Don't touch the LED and also PCB and other circuit parts of Module with your naked fingers or sharpness things.
(6) Take care so that do not pull wire with hand in case of carries or moves LED Lighting Modules.

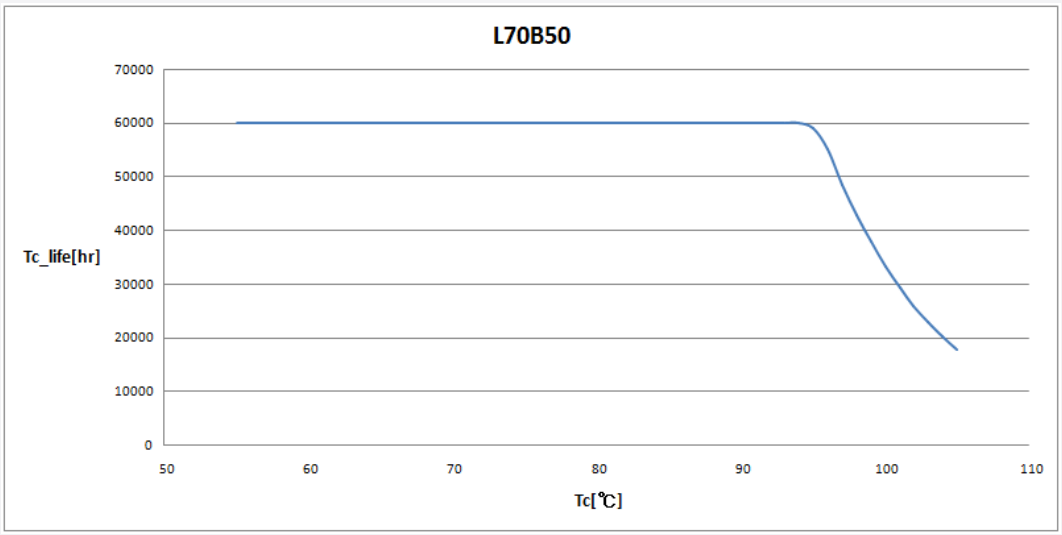
C. Cleaning
The LED Lighting Modules should not be used in any type of fluid such as water, oil, organic solvent, etc.
It is recommended that IPA (Isopropyl Alcohol) be used as a solvent for cleaning the LED Lighting Modules.
When using other solvents, it should be confirmed beforehand whether the solvents will dissolve the
package and the resin or not. Freon solvents should not be used to clean the LEDs because of
worldwide regulations. Do not clean the LED Lighting Modules by the ultrasonic.
Before cleaning, a pre-test should be done to confirm whether any damage to the LED Lighting
Modules will occur.

D. Static Electricity
Static electricity or surge voltage damages the LED Lighting Modules. Please keep the working
process anti-static electricity condition to prevent the Lighting from destroying, as following.
(1) Anyone who handles the unit should be well grounded.(earth ring or anti-static glove)
(2) Anyone who handles the unit should wear anti-electrostatic working clothes.
(3) All kinds of device and instruments, such as working table, measuring instruments and assembly jigs in your production lines should be well grounded.

E. Storage
The LED Lighting Modules must be stored to insert a package of a moisture absorbent
material(silica gel) in a box.

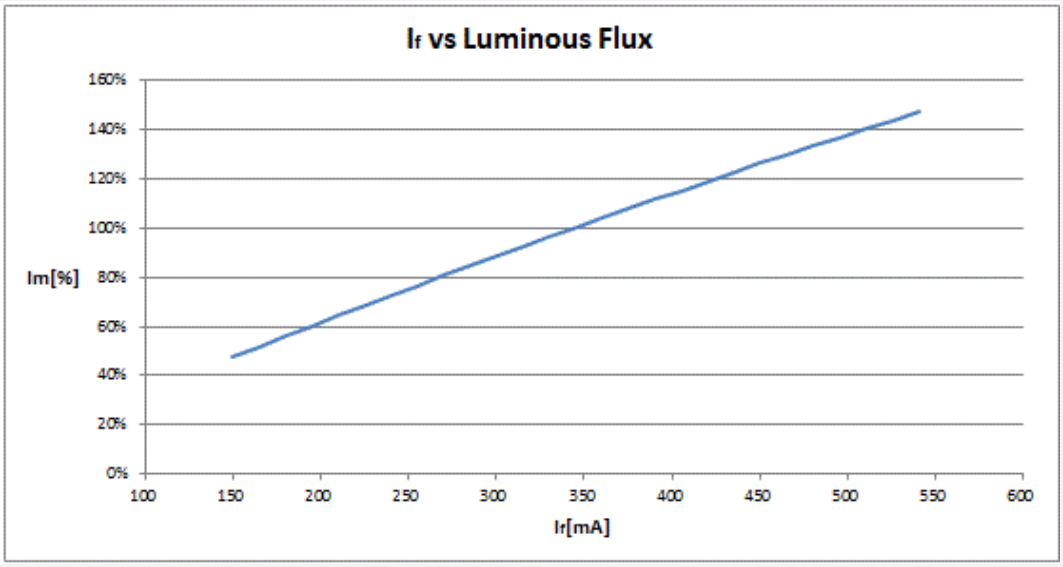
F. Others
If over voltage which exceeds the absolute maximum rating is applied to LED Lighting Modules.
It will cause damage Circuits(that LED is included) and result in destruction.
Do not directly look into lighted LED with naked eyes.
Please use this product within 5 months, which is kept in its original packaging unopened when
stocked

APPENDIX 1. Tc vs Lifetime

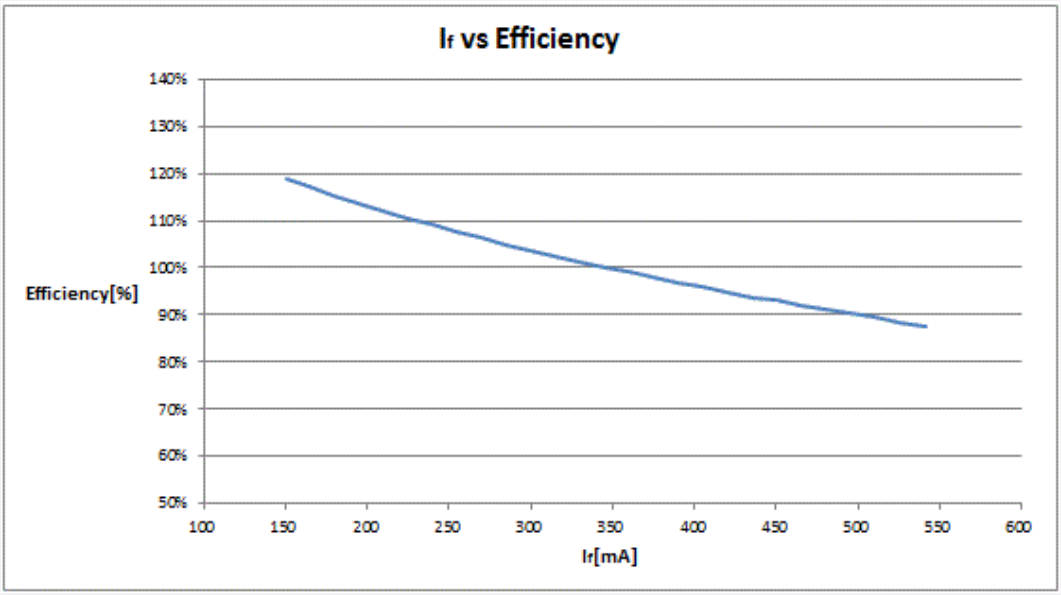


@150mA/LED

APPENDIX 2. If vs Luminous Flux



APPENDIX 3. If vs Efficiency



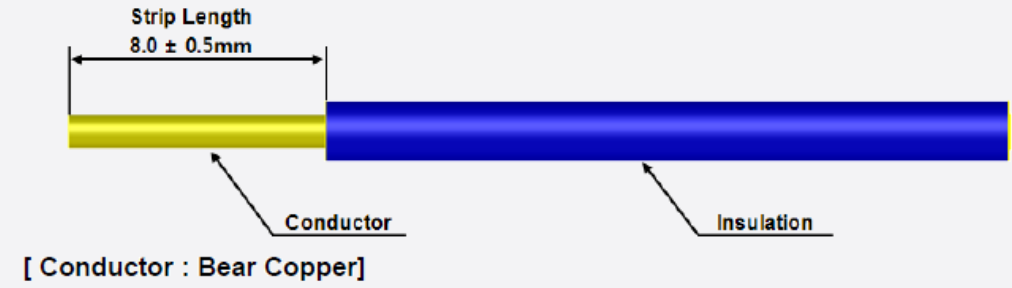
APPENDIX 4. Applicable Solid Wires

A. Applicable solid wires

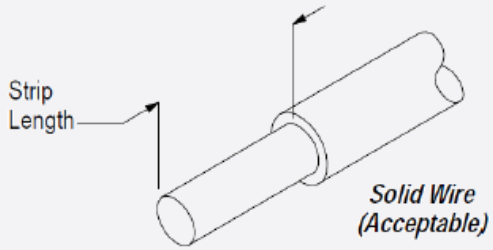
Wire Range AWG NO.	Number of Conductors / Diameter of a conductors (NO. / mm)	Insulation Diameter (mm)	Conductor Type
24	1 / 0.51	1.35	Solid
22	1 / 0.64	1.48	
20	1 / 0.81	1.65	
18	1 / 1.02	1.86	

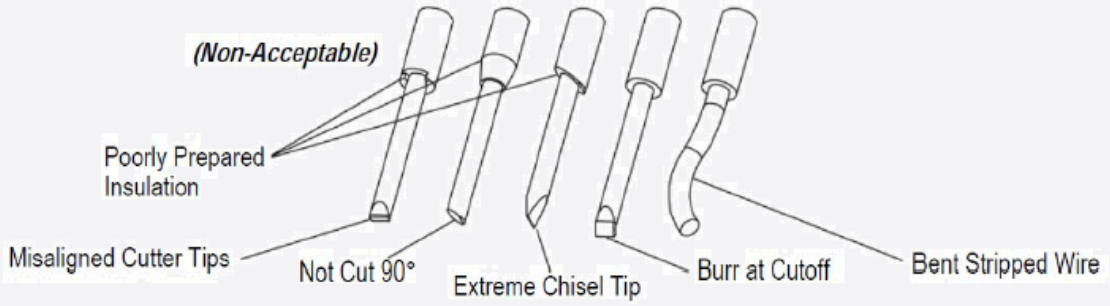
※ outside insulation diameter Φ2.1mm Max.

B. Wire strip length



[Conductor : Bear Copper]





Legal and additional information.

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