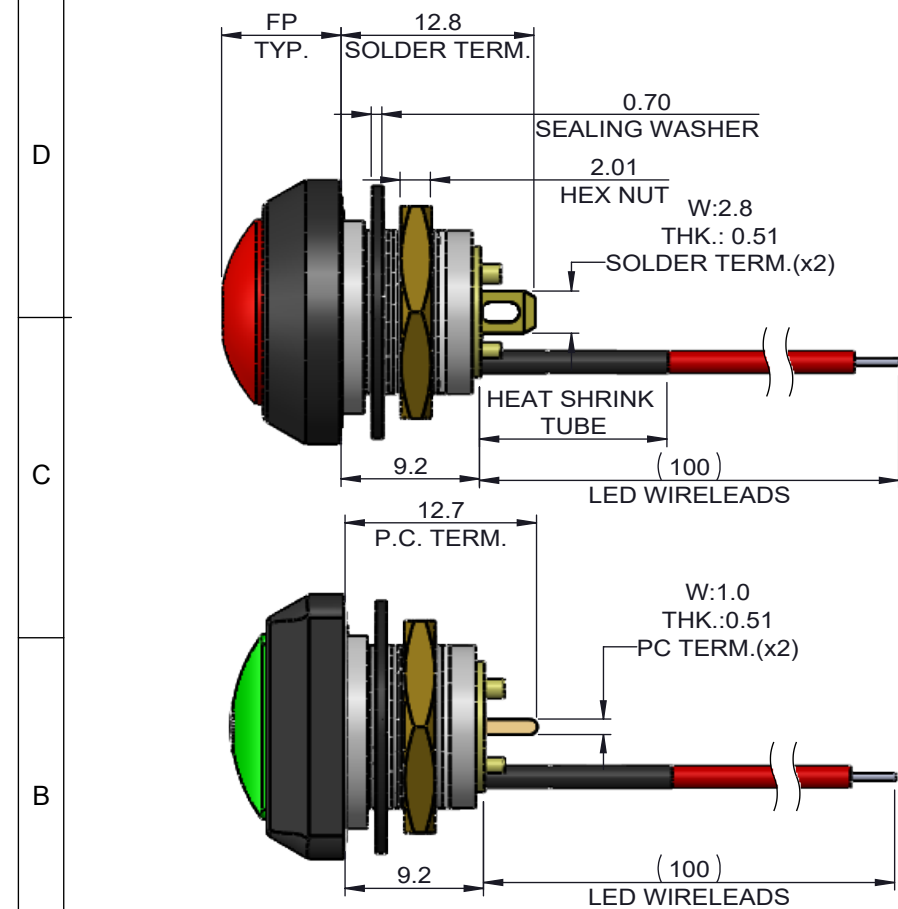
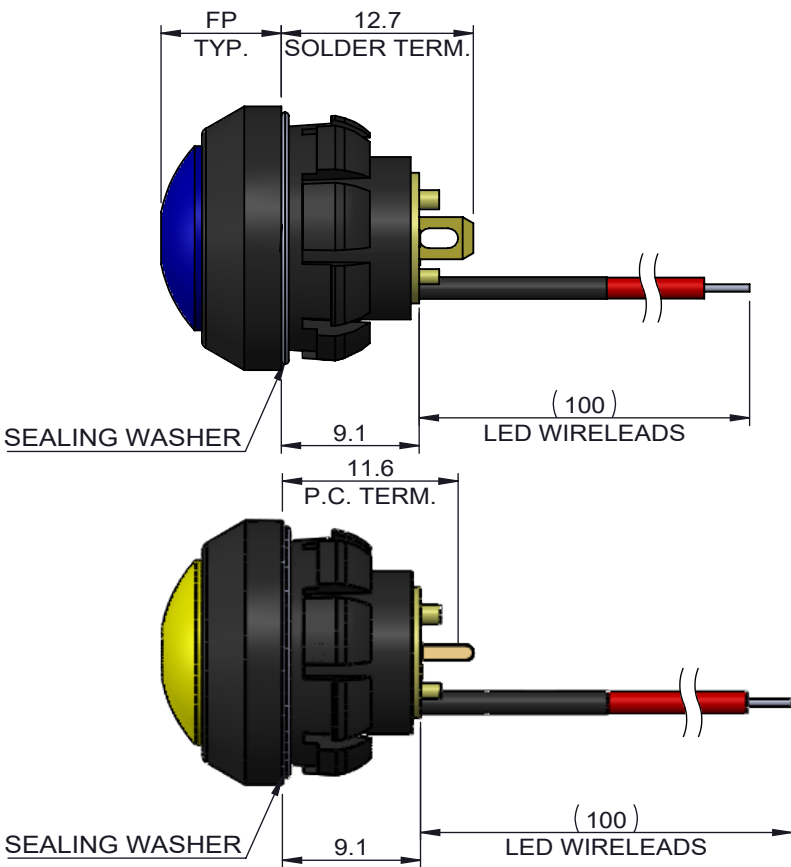


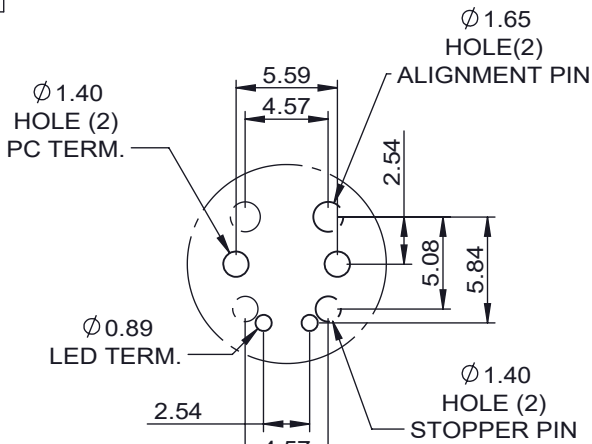
BUSHING TYPE



SNAP FIT TYPE

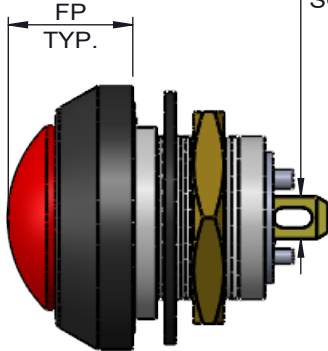


SWITCH ACTION	BUTTON TYPE	FP(mm)
MOMENTARY	NON-ILLUMINATION OR POWER /STANDBY	8.0±0.5
	ILLUMINATION LIGHT PIPE BUTTON	7.6±0.5
	NON-ILLUMINATION HIGH BUTTON	9.9±0.5
MAINTAINED	NON-ILLUMINATION OR POWER /STANDBY	6.5±0.5
	ILLUMINATION LIGHT PIPE BUTTON	6.0±0.5
	NON-ILLUMINATION HIGH BUTTON	8.4±0.5

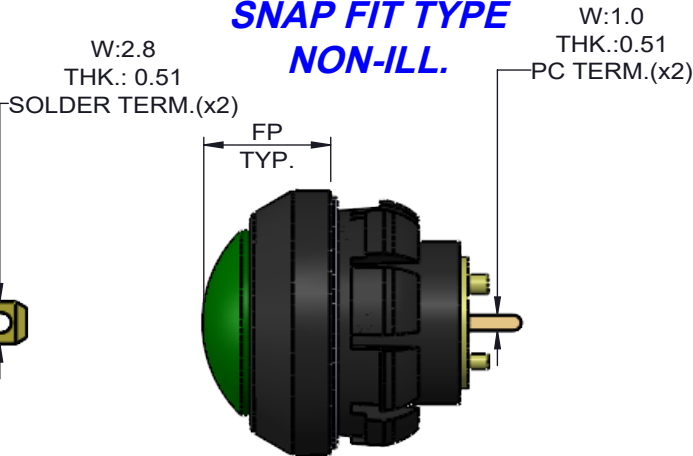


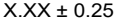
RECOMMENDED P.C. BOARD HOLE PATTERN
(FOR PC TERMINAL)
COMPONENT SIDE

**BUSHING TYPE
NON-ILL.**



**SNAP FIT TYPE
NON-ILL.**



DWG TYPE SALES DRAWING	DRAWN <i>K.Y.</i>	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5 X.XX ± 0.25 ANGULAR ± 5°		DWG TITLE W48- SERIES ,MECHANICAL MOMENTARY/MAINTAINED									
STATUS RELEASE	REVIEW <i>V.W.</i>											DWG NO. W48-1,2,5,6	
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	DATE											REF: ---	



MECHANICAL CHARACTERISTICS:
 SWITCH CIRCUITRY: SPST-NO-DB
 SWITCH ACTION: MOMENTARY
 BUTTON TRAVEL: 2.3mm [.09] NOMINAL
 OPERATING FORCE: 306g [3N] NOMINAL
 PANEL THICKNESS: 0.5 - 3.0mm [.02 - .12]
 CONTACTS: GOLD PLATED
 LIFE(MECHANICAL): 1,000K CYCLES
 NUT TORQUE FORCE: MAX 6 kgf*cm [5.2 LB*in]

ACTUATOR INGRESS PROTECTION: IP67
OPERATING TEMPERATURE: -40°C to +85°C [-40°F to +185°F]

CURRENT RATINGS: 10mA@12VDC, 1000K CYCLES NOMINAL
DIELECTRIC STRENGTH: 1,000VAC
INSULATION RESISTANCE: 1G OHM
CONTACT RESISTANCE:
50m OHMS MAX INITIAL(NON-WIRELEADS)
250m OHMS MAX INITIAL(WIRELEADS)

CURRENT LIMITING RESISTOR IS REQUIRED TO LIMIT LED FORWARD CURRENT TO 20mA.
LED CHARACTERISTICS SEE LED SPECIFICATION TABLE

AWG26 / UL1007

CABLE COLOR:
SW BLUE CABLE
LED (+) RED CABLE ; (-) BLACK CABLE

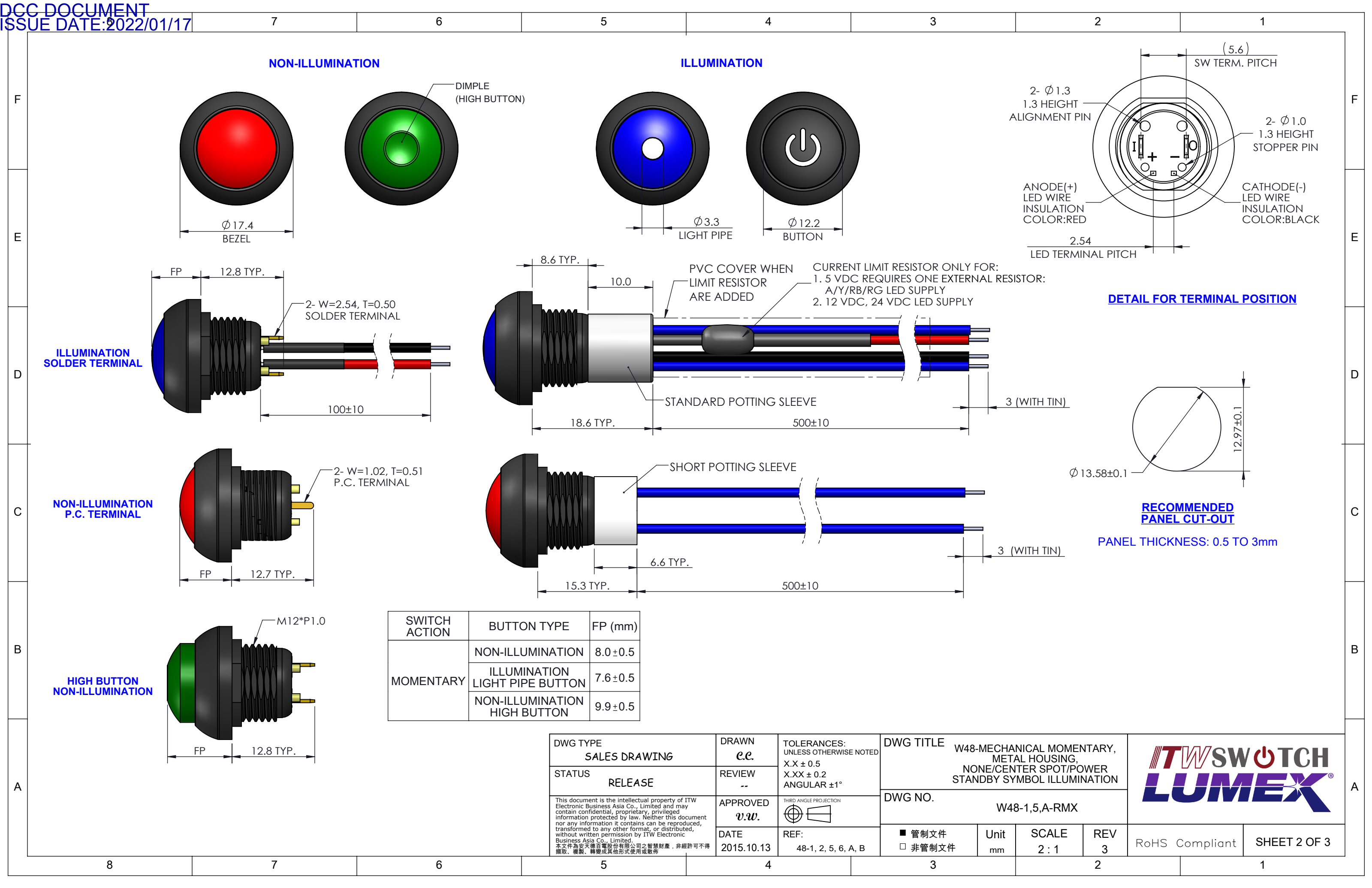
HIGH BUTTON TYPE

BUSHING TYPE

SEALING WASHER
T=0.7
(SUPPLIED IN BULK)

SPECIAL HEX NUT
HEX 14.0, M12*P1.0
T=2.0
(SUPPLIED IN BULK)

- | | | | | | | | | | |
|---|-------------------------|---|--|---|----------------|----------|---|--------------|--|
| DWG TYPE
SALES DRAWING | DRAWN
<i>e.e.</i> | TOLERANCES:
UNLESS OTHERWISE NOTED
X.X ± 0.5
X.XX ± 0.2
ANGULAR ±1° | | DWG TITLE
W48-MECHANICAL MOMENTARY,
METAL HOUSING,
NONE/CENTER SPOT/POWER
STANDBY SYMBOL ILLUMINATION | | |  | | |
| STATUS
RELEASE | REVIEW
-- | | | DWG NO.
W48-1,5,A-RMX | | | | | |
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<i>v.w.</i> | THIRD ANGLE PROJECTION
 | | | | | | | |
| | DATE
2015.10.13 | REF:
48-1, 2, 5, 6, A, B | ☒ 管制文件
☐ 非管制文件 | Unit
mm | SCALE
2 : 1 | REV
3 | RoHS Compliant | SHEET 1 OF 3 | |



W48-X - X - X - X - X - X

SWITCH FUNCTION CODE	SWITCH FUNCTION DESCRIPTION
3	SOLID STATE,MOMENTARY,SOLDER TERMINAL
4	SOLID STATE,MAINTAINED,SOLDER TERMINAL
7	SOLID STATE,MOMENTARY, P.C. TERMINAL
8	SOLID STATE,MAINTAINED, P.C. TERMINAL

BEZEL CODE	BEZEL DESCRIPTION
RB	ROUND, BLACK
SB	SQUARE, BLACK (ONLY FOR BUSHING MOUNTING)

ILLUMINATION CODE	LED COLOR DESCRIPTION
N	NO LED
R	RED
A	AMBER
Y	YELLOW
G	GREEN
B	BLUE
W	WHITE
RG	RED/BLUE
RB	RED/GREEN

BUTTON CODE	BUTTON COLOR DESCRIPTION
BK	BLACK
RD	RED
GR	GREEN
BL	BLUE
YL	YELLOW
OR	ORANGE
WH	WHITE
PK	POWER/STANDBY BLACK (ONLY FOR ROUND BEZEL & BUSHING MOUNT)

MOUNTING CODE	MOUNTING STYLE DESCRIPTION
B	BUSHING
F	SNAP-FIT (ONLY FOR ROUND BEZEL)

LED VOLTAGE CODE	LED VOLTAGE DESCRIPTION
IF BLANK	SEE LED SPEC.
05	5V (SEE NOTE 3)

MECHANICAL CHARACTERISTICS:

SWITCH CIRCUITRY: SPST-NO

SWITCH ACTION: MOMENTARY AND MAINTAINED (PER CHART)

BUTTON TRAVEL: 2.3mm NOMINAL

OPERATING FORCE: 3N [306g] NOMINAL

PANEL THICKNESS:

BUSHING MOUNT: 0.5 - 3.0mm

SNAP MOUNT: 1mm/2mm/3mm ±0.05

NUT TORQUE FORCE: MAX 6 kgf-cm[5.2 LB-in]

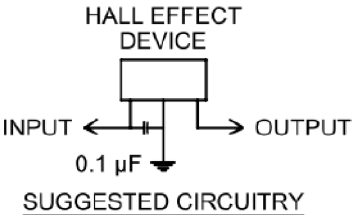
ENVIRONMENTAL SPECIFICATIONS:

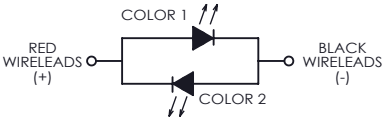
ACTUATOR INGRESS PROTECTION: IP67

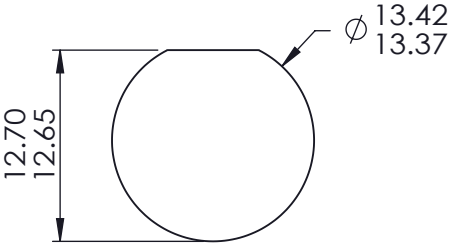
LIFE (MECHANICAL) :
MOMENTRAY: 1,000K CYCLES
MAINTAINED : 50K CYCLES
OPERATING TEMPERATURE:
MOMENTARY: -40°C to +85°C
MAINTAINED :-40°C to +65°C
ELECTRICAL SPECIFICATIONS:
SUPPLY VOLTAGE: 4.2V to 24V, 26.5 MAX
SUPPLY CURRENT:
 B>Brp, Vcc=12V: 3mA TYP to 8mA MAX
 B>Bop, Vcc=12V: 4mA TYP to 8mA MAX
OUTPUT LOAD: SINKING (I out MAX = 25mA)
REVERSE BATTERY VOLTAGE: -30V MAX
REVERSE BATTERY CURRENT: -50mA MAX
STARTUP LIFE:
 MOMENTARY: 1,000,000 CYCLES
 MAINTAINED: 50,000 CYCLES

NOTE

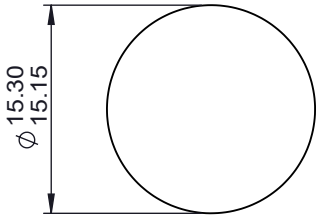
1. CURRENT LIMITING RESISTOR IS REQUIRED
TO LIMIT LED FORWARD CURRENT TO 20mA
2. SUPPLY HEX NUT AND SEALING WASHER BULK PACKED.
3. INNER RESISTOR ONLY FOR LED :RED / BLUE / GREEN / WHITE.



LED SPECIFICATION					
LED CODE	LED SINGLE COLOR		Vf(VDC)	If (mA)	CIRCUITRY
			TYP.		
R	RED		2.0	20	
A	AMBER		2.0	20	
Y	YELLOW		2.0	20	
G	GREEN		3.0	20	
B	BLUE		3.1	20	
W	WHITE		3.3	20	
LED CODE	BICOLOR LED		Vf(VDC)	If (mA)	CIRCUITRY
	COLOR1	COLOR2	TYP.		
RB	RED	BLUE	2.0(RED) 3.3(BLUE)	20	
RG	RED	GREEN	2.0(RED) 3.4(GREEN)	20	



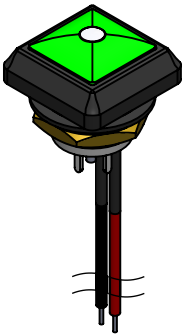
**REFERENCE
PANEL CUT-OUT
BUSHING MOUNT**



**REFERENCE
PANEL CUT-OUT
SNAP FIT MOUNT
PANEL THICKNESS: 1.0mm , 2.0mm , 3.0mm ±0.5**



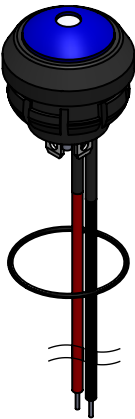
ROUND BEZEL BUSING TYPE



SQUARE BEZEL
BUSING TYPE



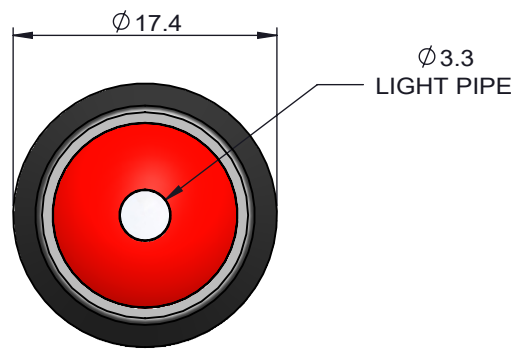
**ROUND BEZEL
BUSING TYPE**



**ROUND BEZEL
SNAP FIT TYPE**

DWG TYPE SALES DRAWING	DRAWN <i>K.Y.</i>	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5 X.XX ± 0.25 ANGULAR ± 5°		DWG TITLE W48-SOLID STATE MOMENTARY/MAINTAINED, SOLD./P.C. TERMINAL,					
STATUS RELEASE	REVIEW <i>V.W.</i>			DWG NO. W48-3,4,7,8					
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	DATE	REF: ---							

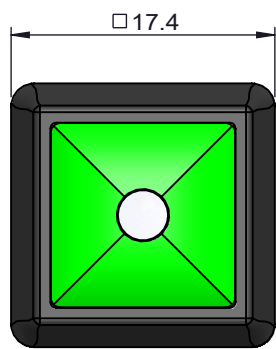




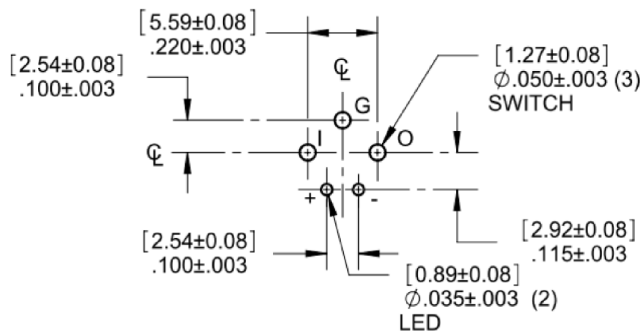
ROUND BEZEL



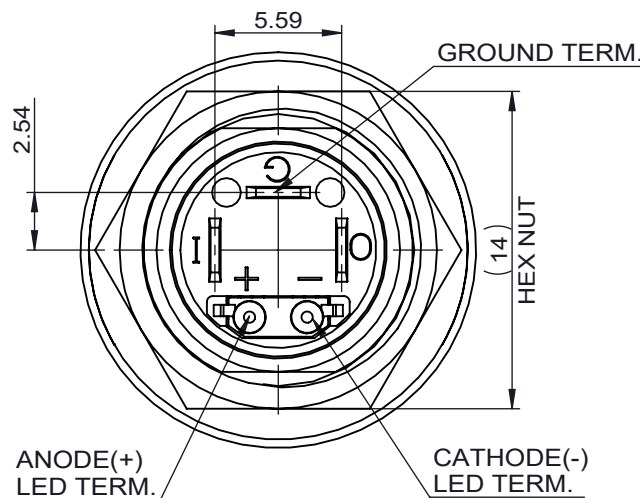
**ROUND BEZEL
POWER/STANBY**



SQUARE BEZEL



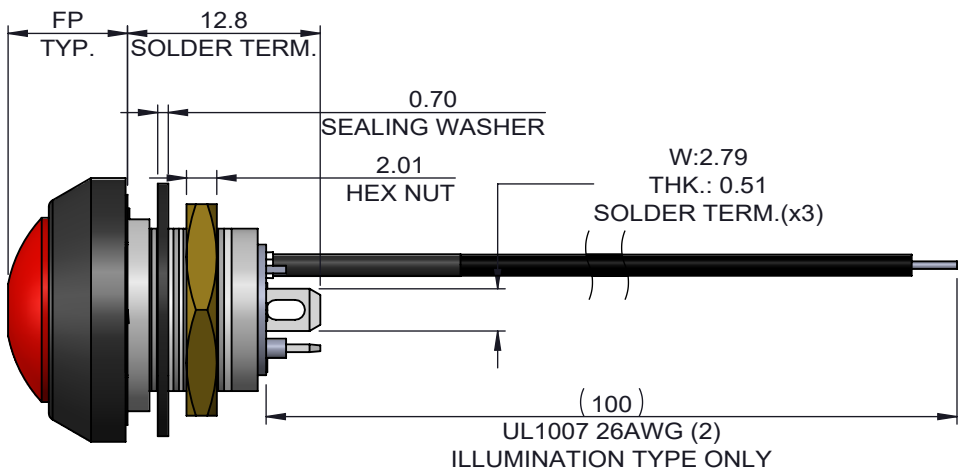
RECOMMENDED PCB HOLE PATTERN
(WITH HOOK-UP WIRES CLIPPED OFF)
SOLDER SIDE



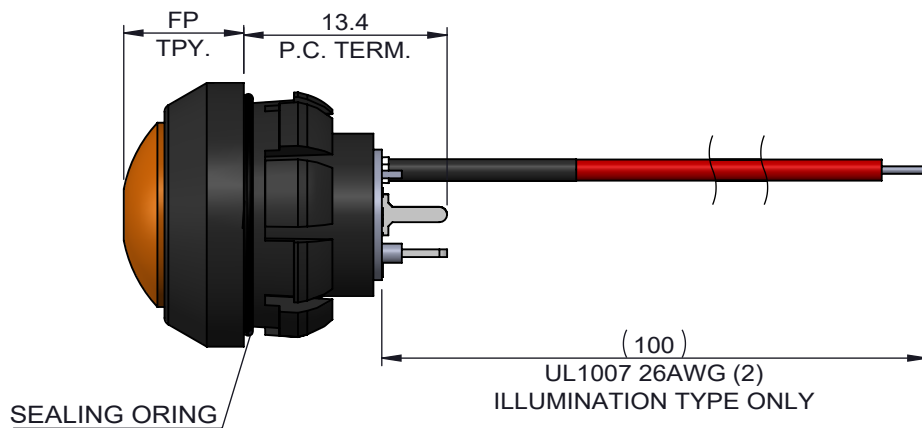
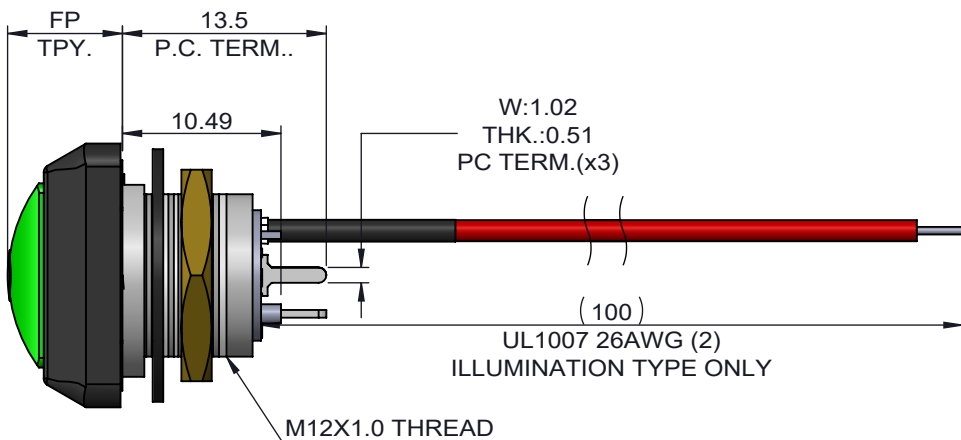
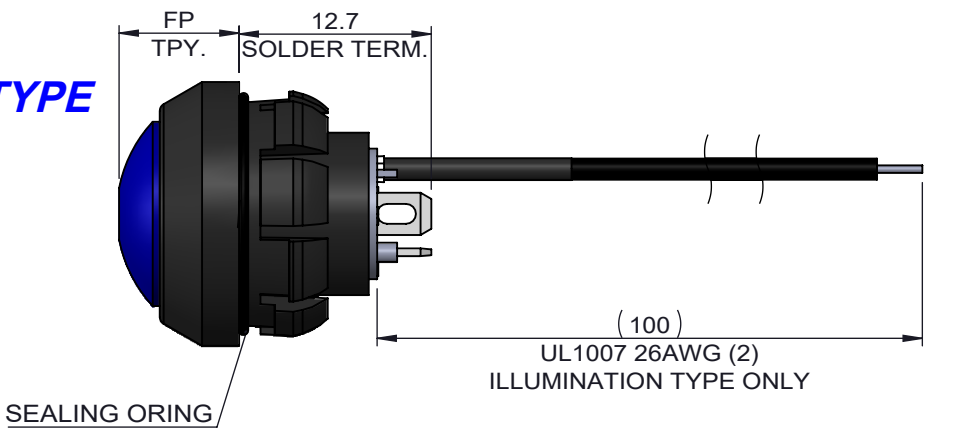
DETAIL OF TERMINAL POSITION

BUSHING TYPE

SWITCH ACTION	BUTTON TYPE	FP(mm)
MOMENTARY	NON-ILLUMINATION	8.0±0.5
	ILLUMINATION LIGHT PIPE BUTTON	7.6±0.5
MAINTAINED	NON-ILLUMINATION	6.5±0.5
	ILLUMINATION LIGHT PIPE BUTTON	6.0±0.5



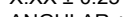
SNAP FIT TYPE



DWG TYPE SALES DRAWING	DRAWN <i>K.Y.</i>	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5 X.XX ± 0.25 ANGULAR ± 5°		DWG TITLE W48-SOLID STATE MOMENTARY/MAINTAINED, SOLD./P.C. TERMINAL,					
STATUS RELEASE	REVIEW <i>v.w.</i>								
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	DATE	REF: ---	■ 管制文件 □ 非管制文件			Unit mm	SCALE -		

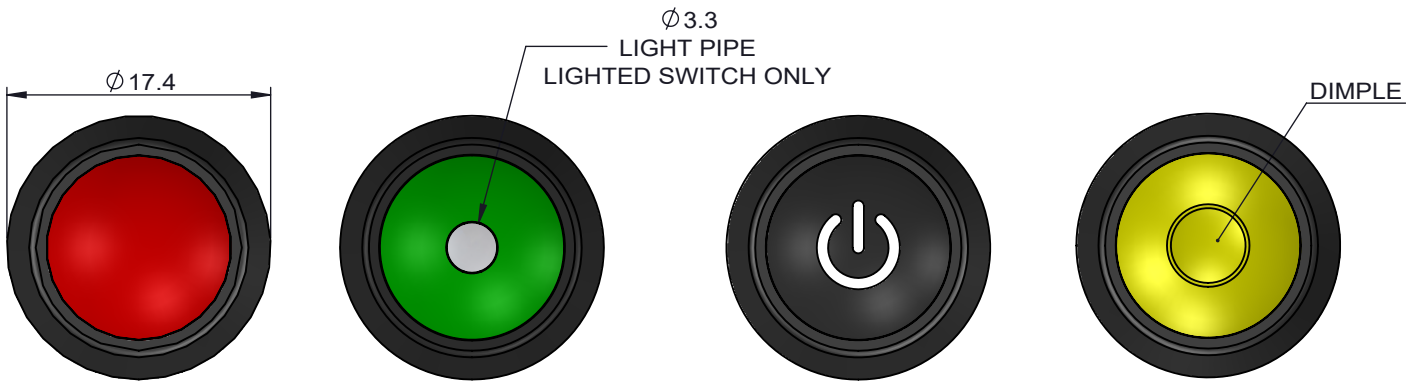
W48- X - XX - X - X - X - X

LED VOLTAGE CODE		LED VOLTAGE DESCRIPTION
NON-WIRELEADS	IF BLANK	SEE LED SPEC.
	05	5V (SEE NOTE4)
WIRELEADS	IF BLANK	SEE LED SPEC.
	05	5V (SEE NOTE4.)
	12	12V
	24	24V

DWG TYPE SALES DRAWING	DRAWN <i>K.Y.</i>	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5 X.XX ± 0.25 ANGULAR ± 5°	DWG TITLE W48-MECHANICAL MOMENTARY/MAINTAINED, 500mm WIRELEADS					
STATUS RELEASE	REVIEW		DWG NO. W48-A,B					
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	DATE 2010/3/11	REF: ---						

BUSHING MOUNT

ROUND BEZEL



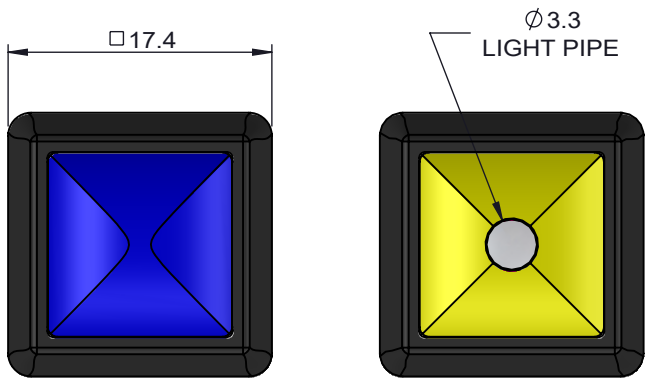
NON-ILL. TYPE

ILL. TYPE

POWER/STANBY
(ILLUMINATION)

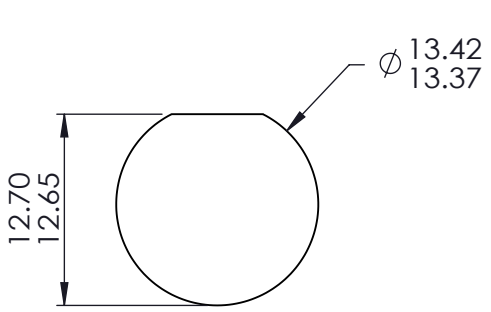
NON-ILL. HIGH BUTTON

SQUARE BEZEL



NON-ILL. TYPE

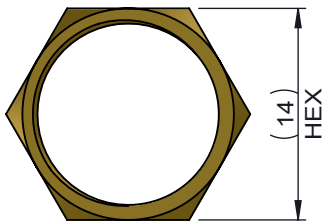
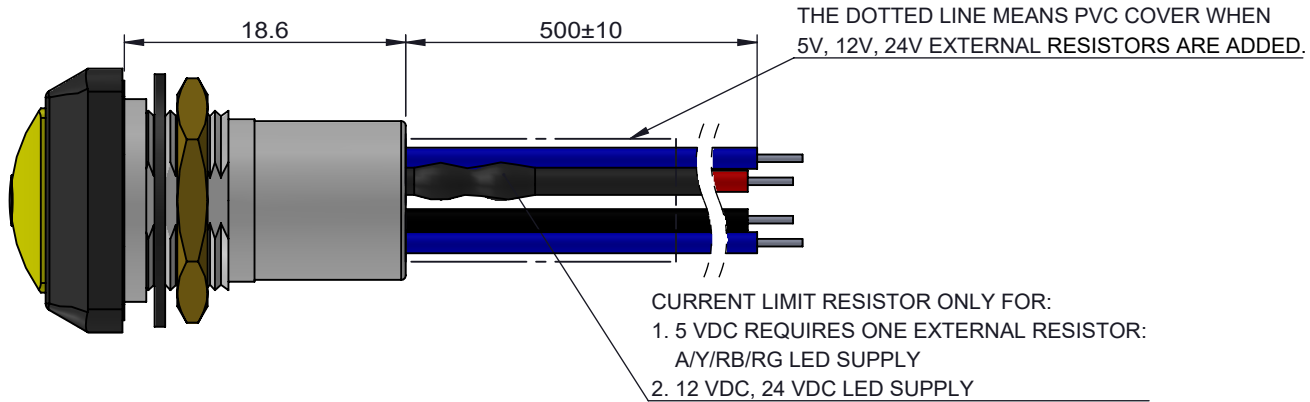
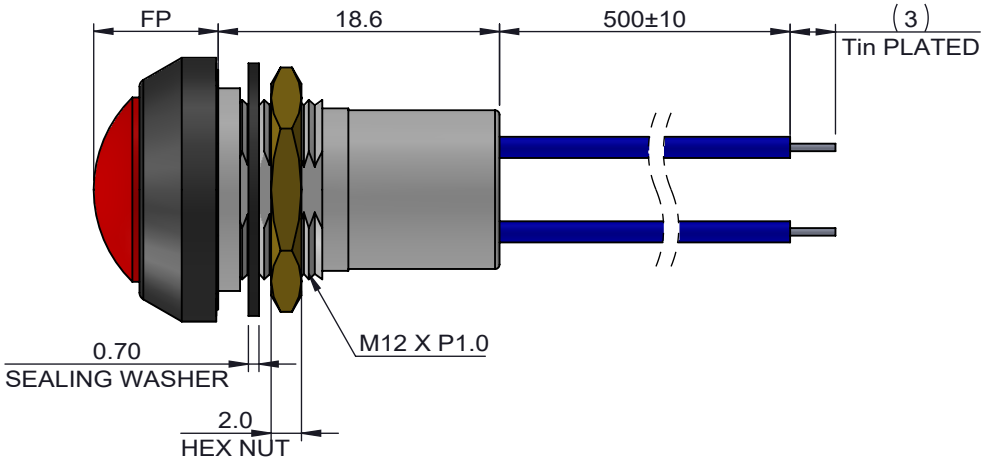
ILL. TYPE



REFERENCE
PANEL CUT-OUT

PANEL THICKNESS: 0.5-3mm

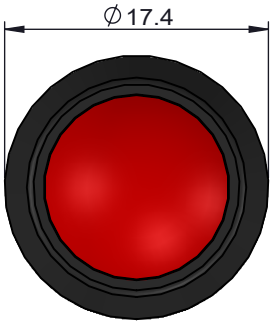
SWITCH ACTION	BUTTON TYPE	FP(mm)
MOMENTARY	NON-ILLUMINATION	8.0±0.5
	ILLUMINATION LIGHT PIPE BUTTON	7.6±0.5
	NON-ILLUMINATION HIGH BUTTON	9.9±0.5
MAINTAINED	NON-ILLUMINATION	6.5±0.5
	ILLUMINATION LIGHT PIPE BUTTON	6.0±0.5
	NON-ILLUMINATION HIGH BUTTON	8.4±0.5



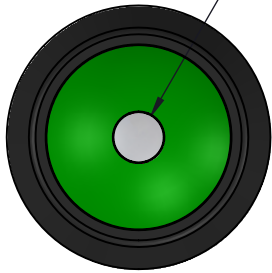
HEX NUT

DWG TYPE SALES DRAWING	DRAWN K.Y.	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5 X.XX ± 0.25 ANGULAR ± 5°	DWG TITLE W48-MECHANICAL MOMENTARY/MAINTAINED, 500mm WIRELEADS						
STATUS RELEASE	REVIEW		DWG NO. W48-A,B						
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	DATE 2010/3/11	REF: ---	☒ 管制文件 ☐ 非管制文件	Unit mm	SCALE	REV 2	RoHS Compliant		

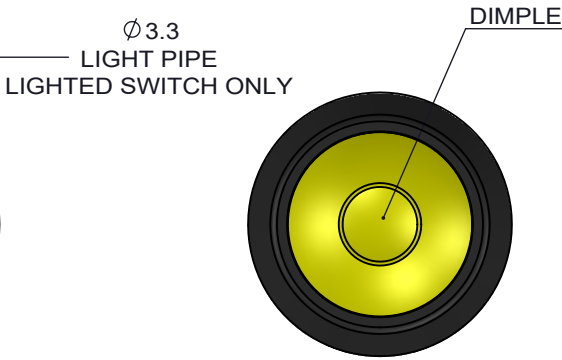
SNAP FIT MOUNT



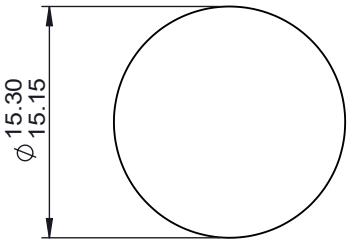
NON-ILL. TYPE



ILL. TYPE



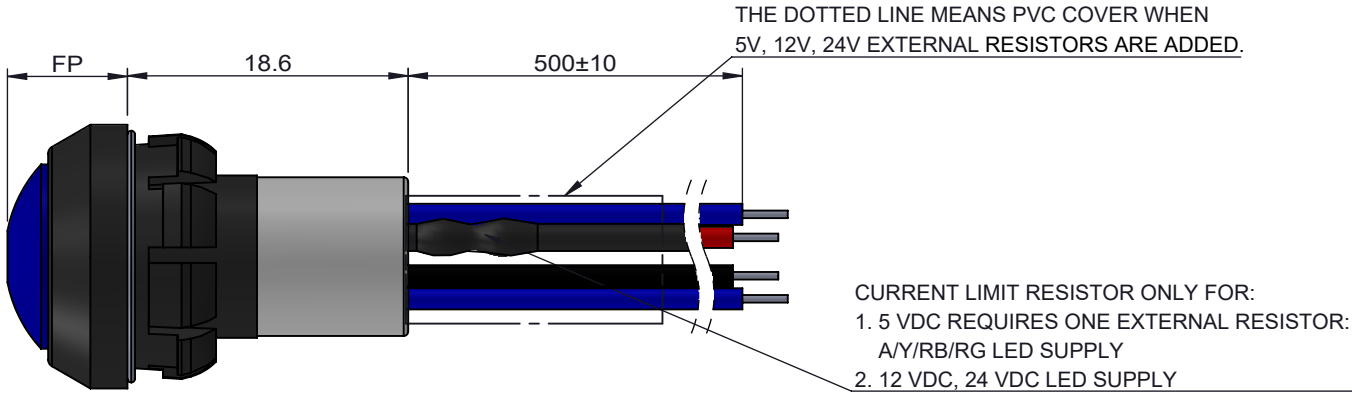
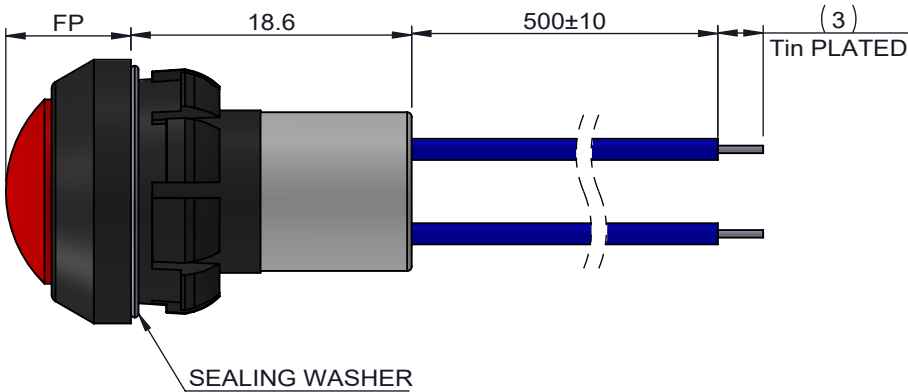
NON-ILL. HIGH BUTTON



RECOMMENDED
PANEL CUT-OUT

PANEL THICKNESS: 1.0mm , 2.0mm , 3.0mm±0.5

SWITCH ACTION	BUTTON TYPE	FP(mm)
MOMENTARY	NON-ILLUMINATION	8.0±0.5
	ILLUMINATION LIGHT PIPE BUTTON	7.6±0.5
	NON-ILLUMINATION HIGH BUTTON	9.9±0.5
MAINTAINED	NON-ILLUMINATION	6.5±0.5
	ILLUMINATION LIGHT PIPE BUTTON	6.0±0.5
	NON-ILLUMINATION HIGH BUTTON	8.4±0.5



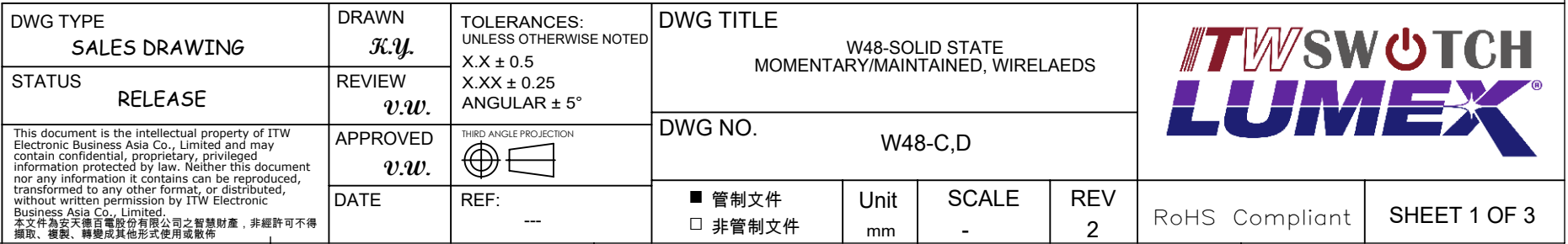
DWG TYPE SALES DRAWING	DRAWN <i>K.Y.</i>	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5 X.XX ± 0.25 ANGULAR ± 5°	DWG TITLE W48-MECHANICAL MOMENTARY/MAINTAINED, 500mm WIRELEADS					
STATUS RELEASE	REVIEW		DWG NO. W48-A,B					
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		REF: ---	☒ 管制文件 ☐ 非管制文件	Unit mm	SCALE	REV 2		

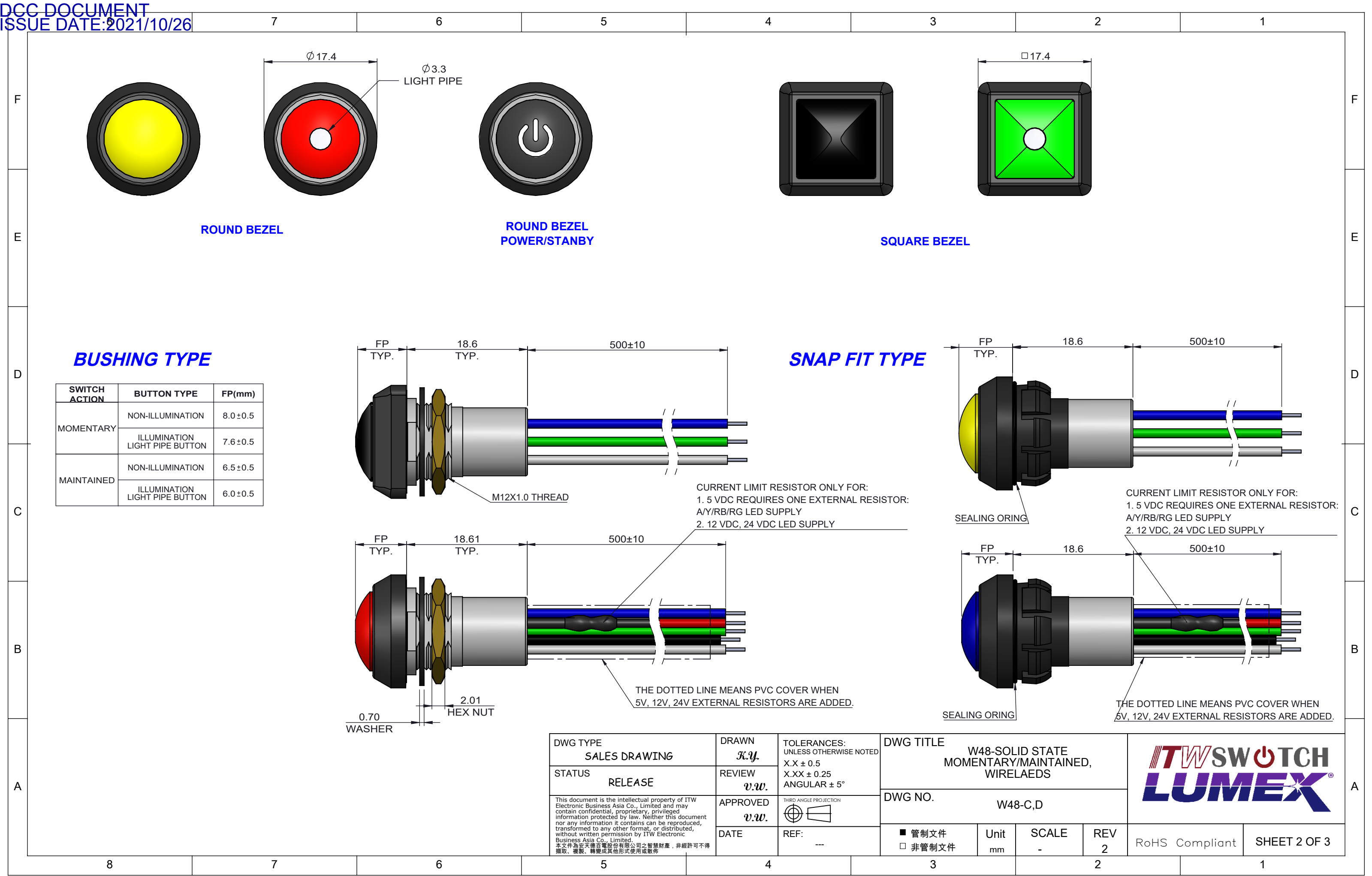
W48- X - X - X - X - X - X										
DESCRIPTION	BEZEL CODE	BEZEL DESCRIPTION	ILLUMINATION CODE	LED COLOR DESCRIPTION	BUTTON CODE	BUTTON COLOR DESCRIPTION	MOUNTING CODE	MOUNTING STYLE DESCRIPTION	LED VOLTAGE CODE	LED VOLTAGE DESCRIPTION
W48-1, SOLDER	RB	ROUND, BLACK	N	NO LED	BK	BLACK	B	BUSHING	IF BLANK	SEE LED SPEC.
W48-2, SOLDER	SB	SQUARE, BLACK (ONLY FOR BUSHING MOUNTING)	R	RED	RD	RED	F	SNAP-FIT (ONLY FOR ROUND BEZEL)	05	5V (SEE NOTE 3)
			A	AMBER	GR	GREEN				

LED VOLTAGE CODE	LED VOLTAGE DESCRIPTION
IF BLANK	SEE LED SPEC.
05	5V (SEE NOTE 3)
12	12V
24	24V

3. INNER RESISTOR ONLY FOR LED :RED / BLUE / GREEN / WHITE.

SWITCH TYPE	WIRELEADS SPECIFICATION	SW TERMINALS			LED			
					COLOR 1		COLOR 2	
ILLUMINATION	AWG26/UL1007	<i>I</i>	<i>O</i>	<i>G</i>	+	-	+	-
NON-ILLUMINATION		BLUE	WHITE	GREEN	RED	BLACK	BLACK	RED
		BLUE	WHITE	GREEN	----	----	----	----





W48- X - XX - X - X - X - X

SWITCH FUNCTION CODE	SWITCH FUNCTION DESCRIPTION
E	MOMENTARY SOLDER TERMINAL
F	MAINTAINE SOLDER TERMINAL
G	MOMENTARY P.C. TERMINAL
H	MAINTAINE P.C. TERMINAL

BEZEL CODE	BEZEL DESCRIPTION
RB	ROUND, BLACK
SB	SQUARE, BLACK (ONLY FOR BUSHING MOUNTING)

ILLUMINATION CODE	LED COLOR DESCRIPTION
R	RED
A	AMBER
Y	YELLOW
G	GREEN
B	BLUE
W	WHITE
RG	RED/BLUE
RB	RED/GREEN

BUTTON CODE	BUTTON COLOR DESCRIPTION
BK	BLACK
RD	RED
GR	GREEN
BL	BLUE
YL	YELLOW
OR	ORANGE
WH	WHITE
PK	POWER/STANDBY BLACK (ONLY FOR ROUND BEZEL & BUSHING MOUNT)

MOUNTING CODE	MOUNTING STYLE DESCRIPTION
B	BUSHING
F	SNAP FIT (ONLY FOR ROUND BEZEL)

LED VOLTAGE CODE	LED VOLTAGE DESCRIPTION
IF BLANK	SEE LED SPEC.
05	5V (SEE NOTE3)

MECHANICAL CHARACTERISTICS:

SWITCH CIRCUITRY: SPST-NO-DB
SWITCH ACTION: MOMENTARY AND MAINTAINED (PER CHART)
BUTTON TRAVEL: 2.3mm NOMINAL
OPERATING FORCE: 3N [306g] NOMINAL
PANEL THICKNESS:
BUSHING MOUNT: 0.5 - 3.0mm
SNAP MOUNT: 1mm/2mm/3mm ± 0.05
CONTACTS: GOLD PLATED
NUT TORQUE FORCE: MAX 6 kgf-cm[5.2 LB-in]

ENVIRONMENTAL SPECIFICATIONS:

ACTUATOR INGRESS PROTECTION: IP67

LIFE(MECHANICAL):

MOMENTRAY: 1,000K CYCLES
MAINTAINED : 50K CYCLES

OPERATING TEMPERATURE:

MOMENTARY: -40 °C to +85 °C

MAINTAINED: -40 °C to +65 °C

ELECTRICAL SPECIFICATIONS:

CURRENT RATINGS:

MOMENTRAY: 10mA@12VAC, 1,000K CYCLES NOMINAL

MAINTAINED : 50K CYCLES NOMINAL

DIELECTRIC STRENGTH: 1,000VAC

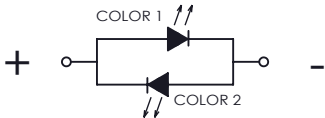
INSULATION RESISTANCE: 1G OHM

CONTACT RESISTANCE:

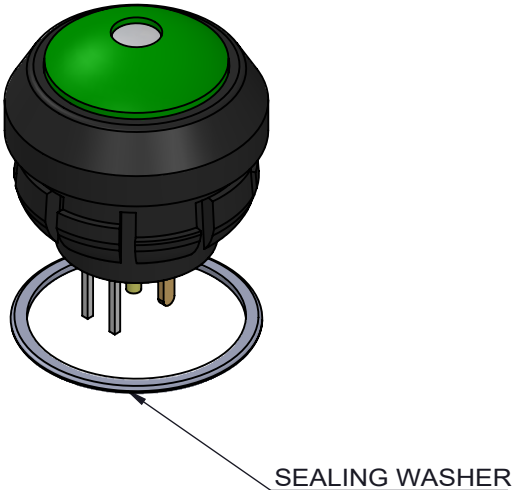
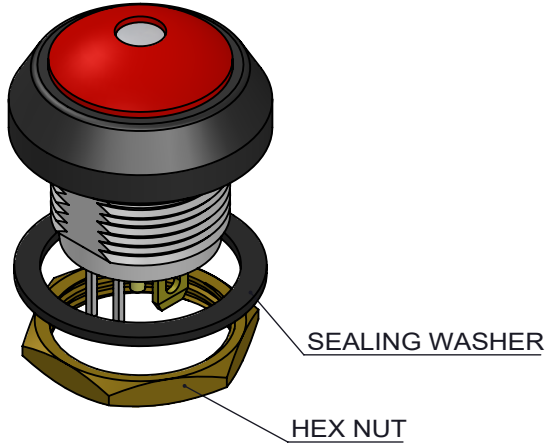
50m OHMS MAX INITIAL

NOTE

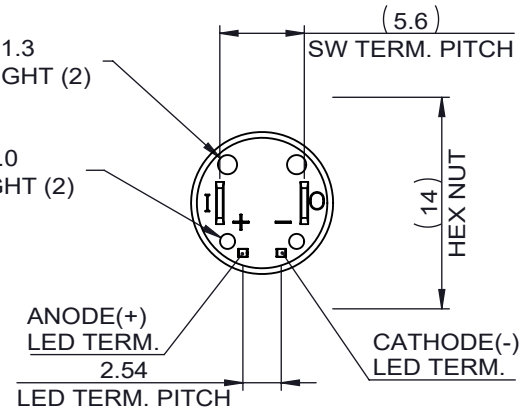
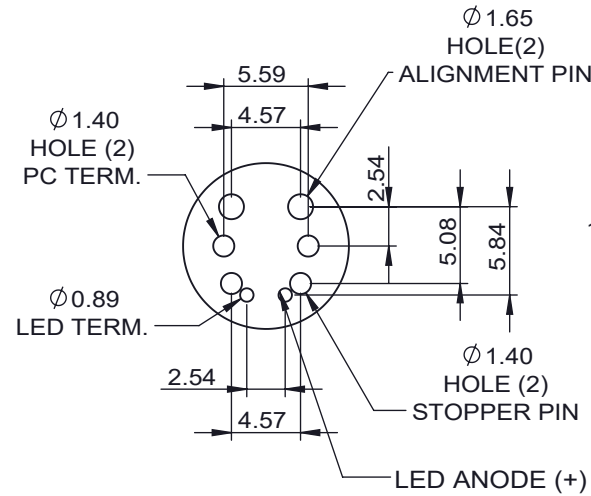
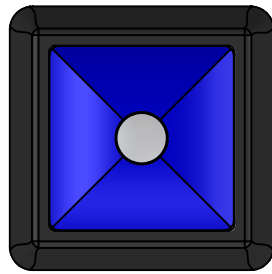
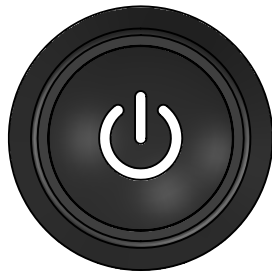
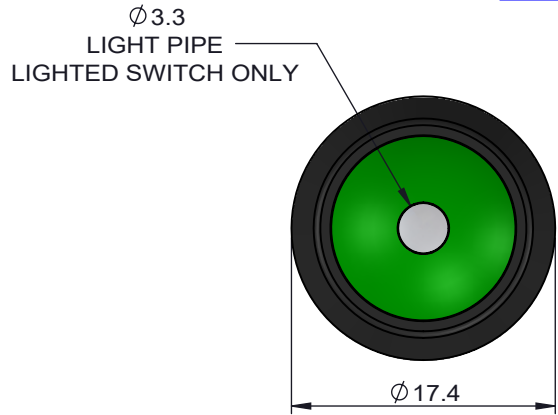
- 1.CURRENT LIMITING RESISTOR IS REQUIRED TO LIMIT LED FORWARD CURRENT TO 20mA
2. SUPPLY HEX NUT AND SEALING WASHER BULK PACKED.
- 3.INNER RESISTOR ONLY FOR LED :RED / BLUE / GREEN / WHITE.

LED SPECIFICATION					
LED CODE	LED SINGLE COLOR		Vf(VDC)	If (mA)	
			TYP.		
R	RED		2.0	20	
A	AMBER		2.0	20	
Y	YELLOW		2.0	20	
G	GREEN		3.0	20	
B	BLUE		3.1	20	
W	WHITE		3.3	20	
LED CODE	BICOLOR LED		Vf(VDC)	If (mA)	CIRCUITRY
	COLOR1	COLOR2	TYP.		
RB	RED	BLUE	2.0(RED) 3.3(BLUE)	20	
RG	RED	GREEN	2.0(RED) 3.4(GREEN)	20	

NOTE:
Hand Soldering Temperature (4mm above from Body) : 320°C for 3 seconds

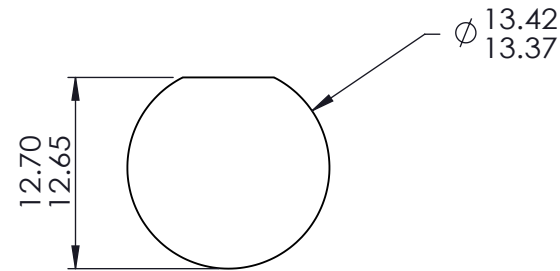
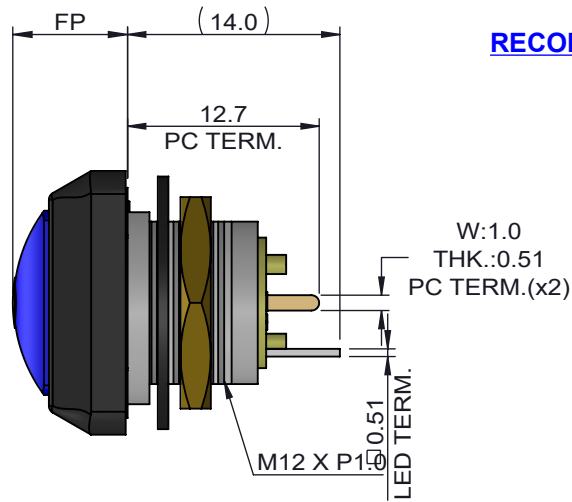
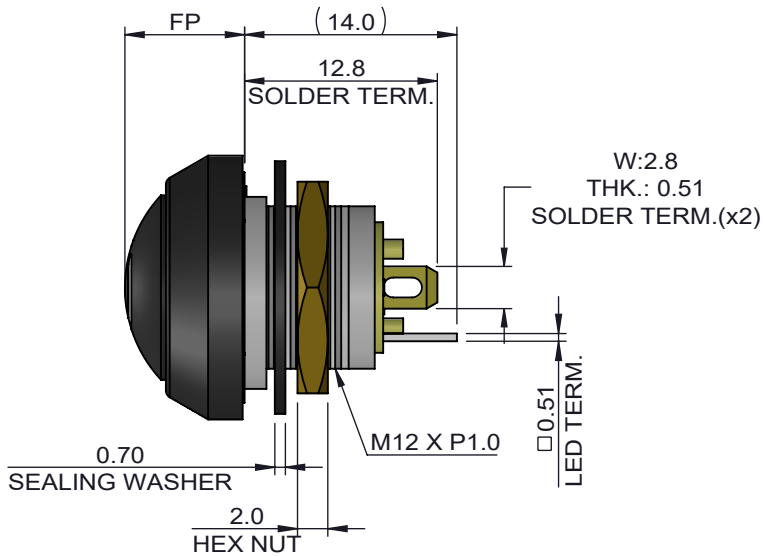


DWG TYPE SALES DRAWING	DRAWN <i>K.Y.</i>	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5 X.XX ± 0.25 ANGULAR ± 5°		DWG TITLE W48-MECHANICAL MOMENTARY/MAINTAINED, CENTER SPOT/POWER-STANDBY ILLUMINATION							
STATUS RELEASE	REVIEW			DWG NO. W48-E,F,G,H							
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	DATE 2010/3/11	REF: ---									



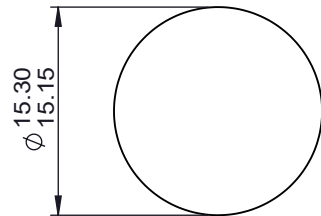
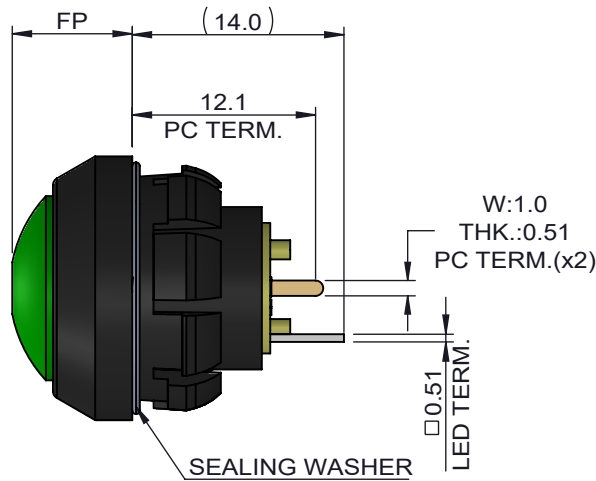
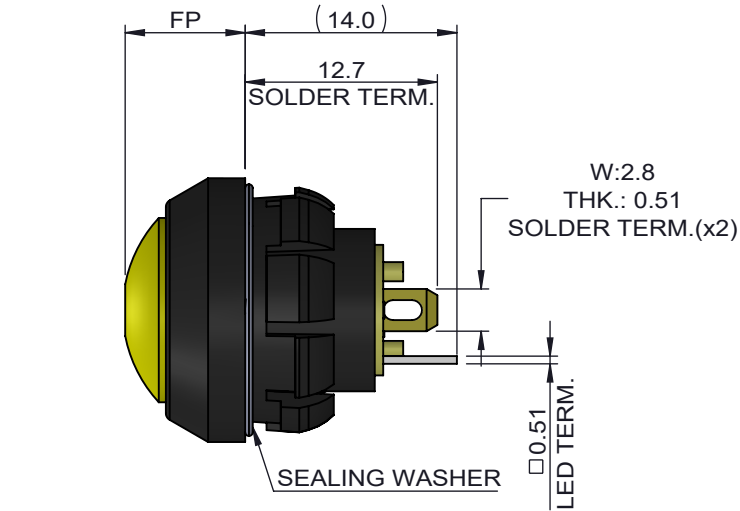
RECOMMENDED P.C. BOARD HOLE PATTERN
(FOR PC TERMINAL)
COMPONENT SIDE

DETAIL OF TERMINAL POSITION



REFERENCE
PANEL CUT-OUT

PANEL THICKNESS: 0.5-3mm



RECOMMENDED PANEL CUT-OUT

PANEL THICKNESS: 1.0mm , 2.0mm , 3.0mm_{±0.5}

SWITCH ACTION	BUTTON TYPE	FP(mm)
MOMENTARY	ILLUMINATION LIGHT PIPE BUTTON	7.6±0.5
MAINTAINED	ILLUMINATION LIGHT PIPE BUTTON	6.0±0.5

DWG TYPE SALES DRAWING	DRAWN K.Y.	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5		DWG TITLE W48-MECHANICAL MOMENTARY/MAINTAINED, CENTER SPOT/POWER-STANDBY ILLUMINATION				ITW SWITCH LUMEX			
STATUS RELEASE	REVIEW	X.XX ± 0.25 ANGULAR ± 5°		DWG NO. W48-E,F,G,H							
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	DATE 2010/3/11	REF: ---									

W48- X - RM - X - X - X - X

SWITCH FUNCTION CODE	SWITCH FUNCTION DESCRIPTION
A	MECHANICAL,MOMENTARY, WIRELEADS
B	MECHANICAL,MAINTAINE, WIRELEADS
E	MECHANICAL,MOMENTARY,SOLDER TERMINAL
F	MECHANICAL,MAINTAINE,SOLDER TERMINAL
G	MECHANICAL,MOMENTARY,P.C. TERMINAL
H	MECHANICAL,MAINTAINE,P.C. TERMINAL

BEZEL CODE	BEZEL DESCRIPTION
RM	ROUND,BLACK MIRROR

ILLUMINATION CODE	LED COLOR DESCRIPTION
N	NONE
R	RED
A	AMBER
Y	YELLOW
G	GREEN
B	BLUE
W	WHITE
RG	RED/BLUE
RB	RED/GREEN

BUTTON CODE (SEE NOTE 3.)	BUTTON COLOR DESCRIPTION
(H)BK	BLACK
(H)RD	RED
(H)GR	GREEN
(H)BL	BLUE
(H)YL	YELLOW
(H)OR	ORANGE
(H)WH	WHITE

MOUNTING CODE	MOUNTING STYLE DESCRIPTION
B	BUSHING
F	SNAP FIT

LED VOLTAGE CODE		LED VOLTAGE DESCRIPTION
NON-WIRELEADS	IF BLANK	SEE LED SPEC.
	05	5V (SEE NOTE 4)
WIRELEADS	IF BLANK	SEE LED SPEC.
	05	5V (SEE NOTE 4.)
	12	12V
	24	24V

MECHANICAL CHARACTERISTICS:

SWITCH CIRCUITRY: SPST-NO-DB
SWITCH ACTION: MOMENTARY AND MAINTAINED (PER CHART)
BUTTON TRAVEL: 2.3mm NOMINAL
OPERATING FORCE: 3N [306g] NOMINAL
PANEL THICKNESS:
BUSHING MOUNT: 0.5 - 3.0mm
SNAP MOUNT: 1mm/2mm/3mm ±0.05
CONTACTS: GOLD PLATED
NUT TORQUE FORCE: MAX 6 kgf-cm[5.2 LB-in]

ENVIRONMENTAL SPECIFICATIONS:

ACTUATOR INGRESS PROTECTION: IP67

OPERATING TEMPERATURE:

MOMENTARY: -40°C to +85°C

MAINTAINED :-40°C to +65°C

LIFE(MECHANICAL):

MOMENTRAY: 1,000K CYCLES
MAINTAINED : 50K CYCLES

ELECTRICAL SPECIFICATIONS:

CURRENT RATINGS:

MOMENTRAY: 10mA@12VDC, 1,000K CYCLES

MAINTAINED : 50K CYCLES NOMINAL

DIELECTRIC STRENGTH: 1,000VAC

INSULATION RESISTANCE: 1G OHM

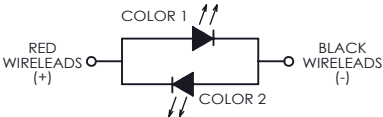
CONTACT RESISTANCE:

50m OHMS MAX INITIAL(NON-WIRELEADS)

250m OHMS MAX INITIAL(WIRELEADS)

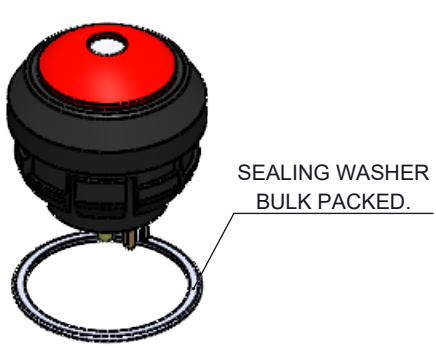
NOTE

1. CURRENT LIMITING RESISTOR IS REQUIRED
TO LIMIT LED FORWARD CURRENT TO 20mA
2. SUPPLY HEX NUT AND SEALING WASHER BULK PACKED.
3. HIGH-BUTTON OPTION, DENOTED (H), ONLY AVAILABLE FOR
ROUND BEZEL AND NON-ILL.TYPE. OMIT (H) FOR STANDARD BUTTON.
4. INNER RESISTOR ONLY FOR LED :RED / BLUE / GREEN / WHITE.

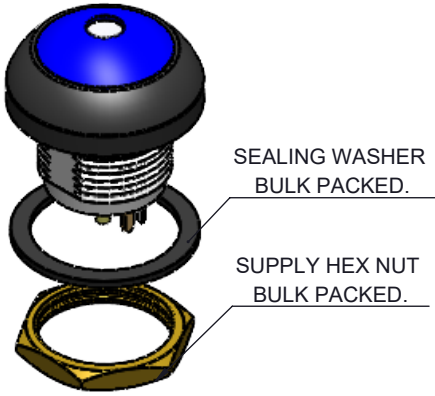
LED SPECIFICATION					
LED CODE	LED SINGLE COLOR		Vf(VDC)	If (mA)	CIRCUITRY 
			TYP.		
R	RED		2.0	20	
A	AMBER		2.0	20	
Y	YELLOW		2.0	20	
G	GREEN		3.0	20	
B	BLUE		3.1	20	
W	WHITE		3.3	20	
LED CODE	BICOLOR LED		Vf(VDC)	If (mA)	CIRCUITRY 
	COLOR1	COLOR2	TYP.		
RB	RED	BLUE	2.0(RED) 3.3(BLUE)	20	
RG	RED	GREEN	2.0(RED) 3.4(GREEN)	20	

Notes:
Hand Soldering Temperature (4mm above from Body) : 320°C for 3 seconds

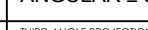
WIRELEADS SPECIFICATION					
WIRELEADS TYPE	WIRELEADS SPECIFICATION	SW TERMINAL		LED	
		/	O	+	-
ILLUMINATION	AWG26 / UL1007	BLUE	BLUE	RED	BLACK
NON-ILLUMINATION		BLUE	BLUE	--	--



SNAP FIT MOUNT

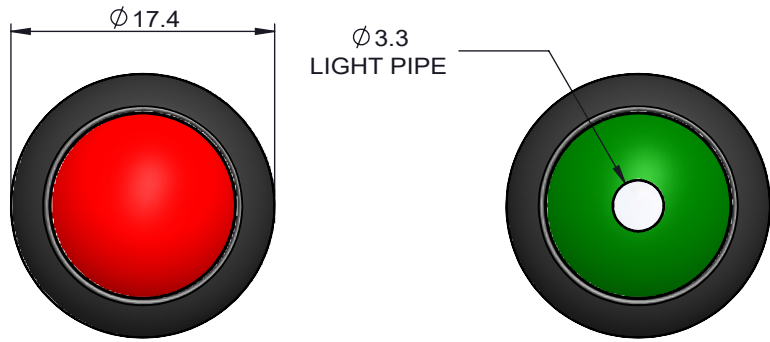


BUSHING MOUNT

DWG TYPE SALES DRAWING	DRAWN <i>K.Y.</i>	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5 X.XX ± 0.25 ANGULAR ± 5°		DWG TITLE W48-RM SERIES ,MECHANICAL MOMENTARY/MAINTAINED							
STATUS RELEASE	REVIEW <i>V.W.</i>			DWG NO. W48-A,B,E,F,G,H-RM							
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	DATE 2020/4/17	REF: ---	☒ 管制文件 ☐ 非管制文件		Unit mm	SCALE -	REV 3	RoHS Compliant		SHEET 1 OF 4	

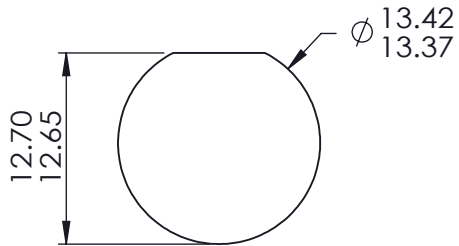


BUSHING MOUNTING

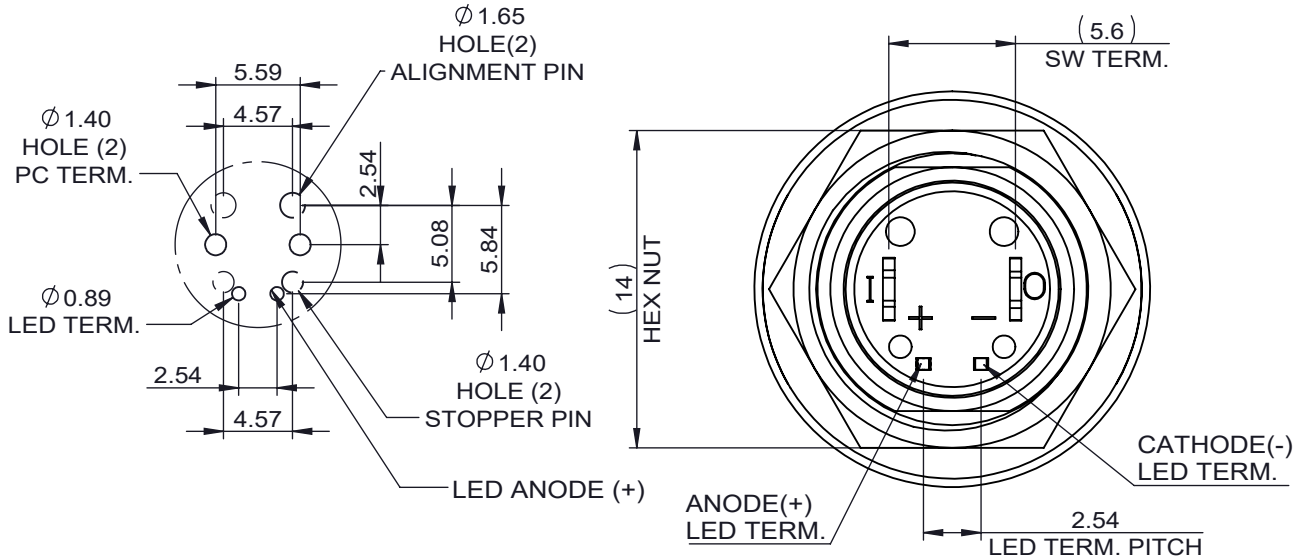


NONE-ILLUMINATION

ILLUMINATION

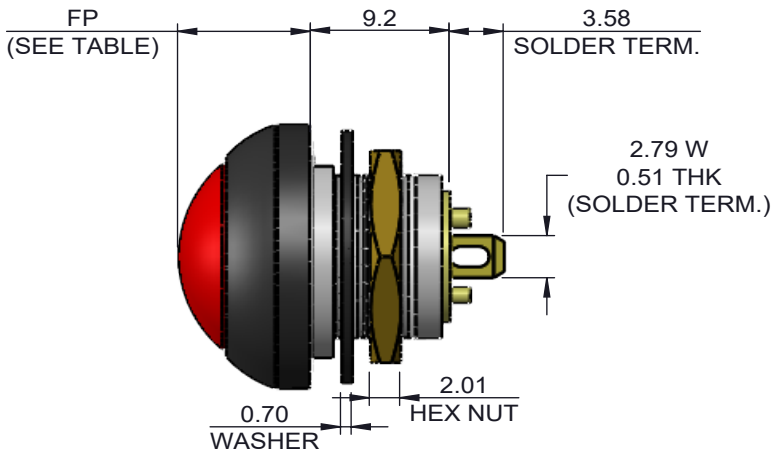


REFERENCE
PANEL CUT-OUT
BUSHING MOUNT

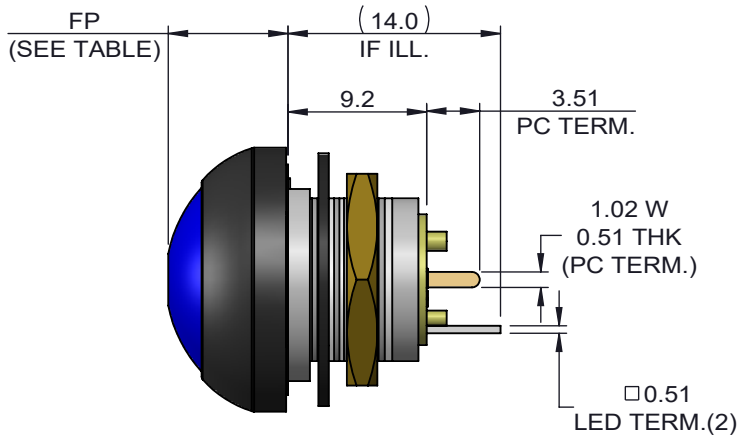


RECOMMENDED P.C. BOARD HOLE PATTERN
(FOR PC TERMINAL)
COMPONENT SIDE

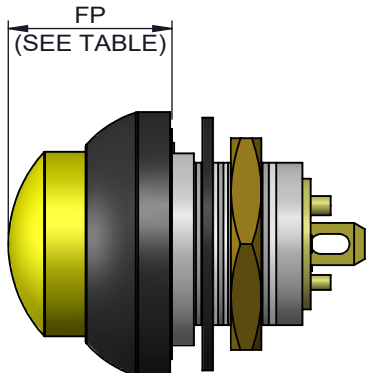
DETAIL OF TERMINAL POSITION



SOLDER TERMINAL



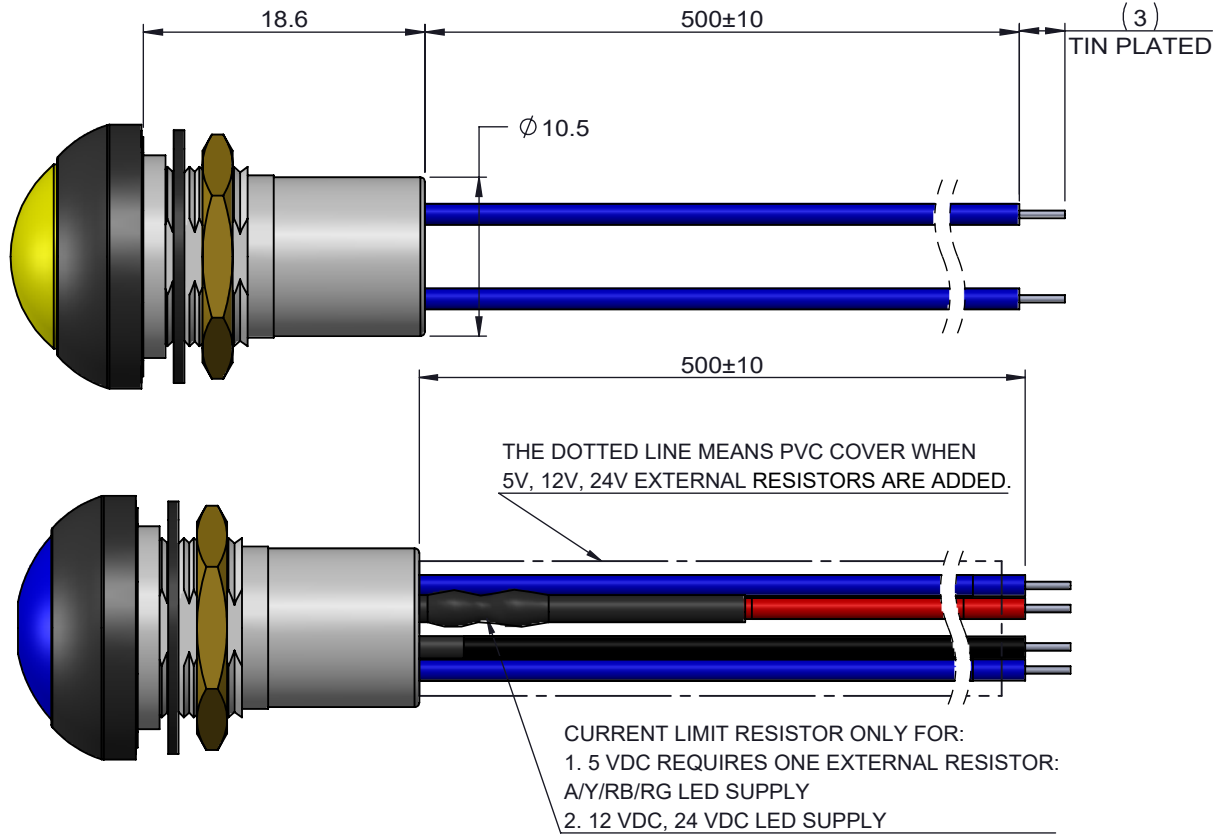
PC TERMINAL



HIGH BUTTON

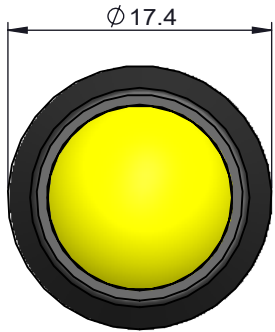
BUTTON TYPE	FP(mm)
NON-ILLUMINATION	8.8±0.5
ILLUMINATION: LIGHT PIPE BUTTON	7.9±0.5
HIGH BUTTON	10.8±0.5

WIRELEADS

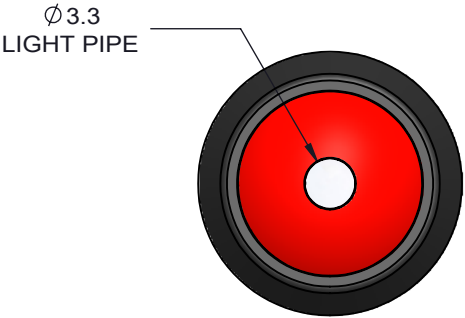


DWG TYPE SALES DRAWING	DRAWN <i>K.Y.</i>	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5 X.XX ± 0.25 ANGULAR ± 5°	DWG TITLE W48-RM SERIES ,MECHANICAL MOMENTARY/MAINTAINED									
STATUS RELEASE	REVIEW <i>v.w.</i>										DWG NO. W48-A,B,E,F,G,H-RM	
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	DATE 2020/4/17	REF: ---										

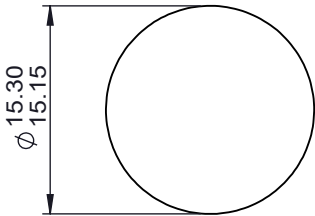
SNAP FIT MOUNTING



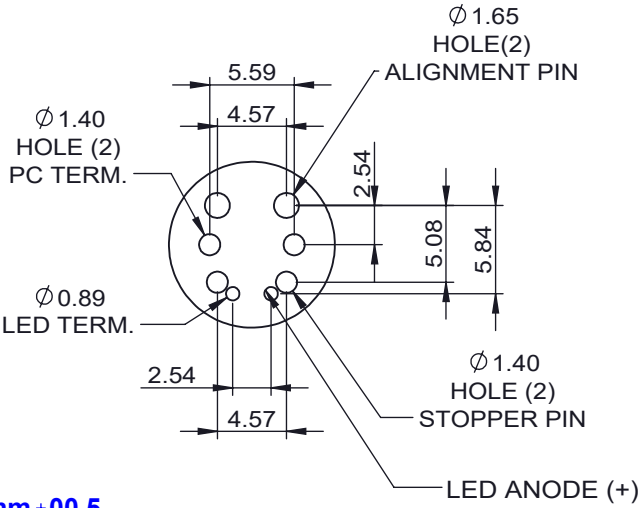
NONE-ILLUMINATION



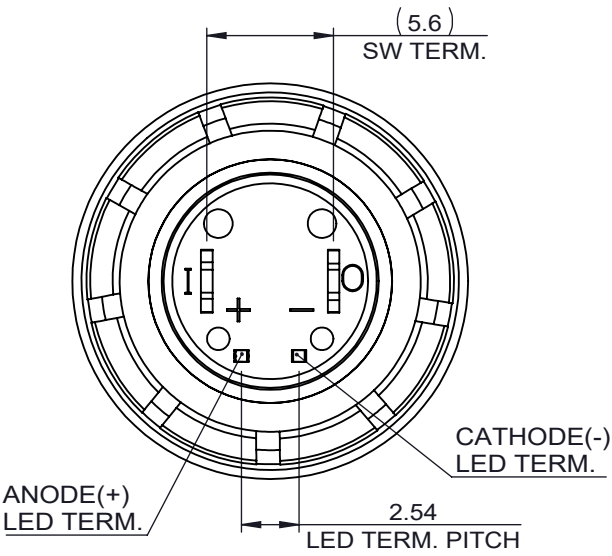
ILLUMINATION



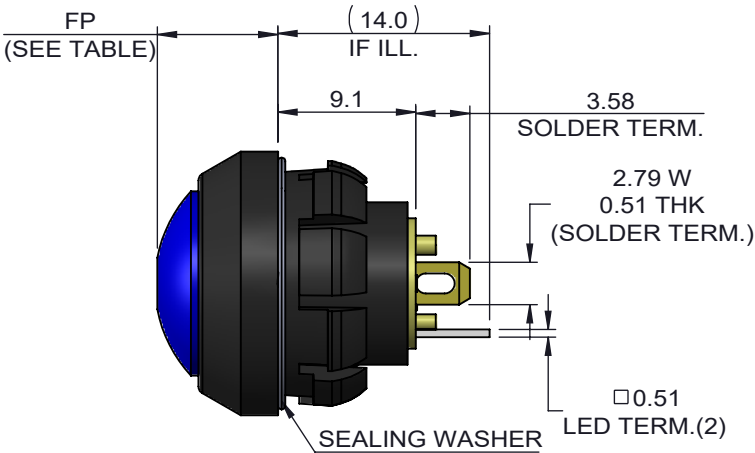
REFERENCE
PANEL CUT-OUT
SNAP FIT MOUNT
PANEL THICKNESS: 1.0mm , 2.0mm , 3.0mm ±0.5



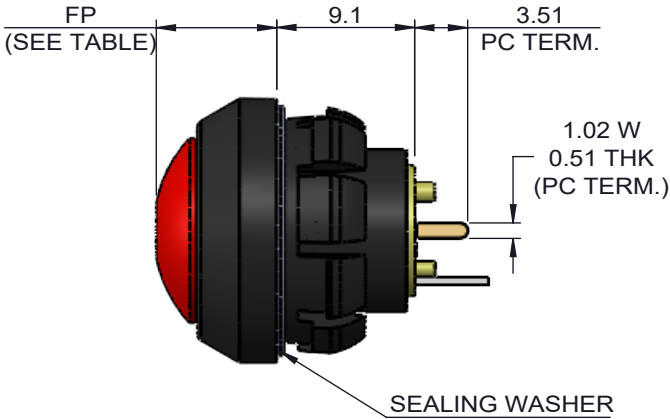
RECOMMENDED P.C. BOARD HOLE PATTERN
(FOR PC TERMINAL)
COMPONENT SIDE



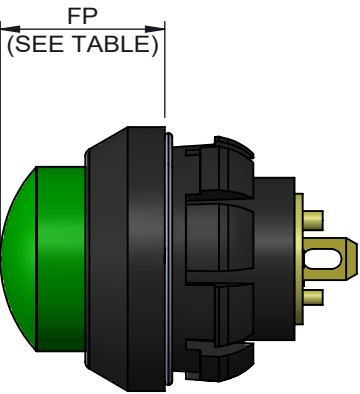
DETAIL OF TERMINAL POSITION



SOLDER TERMINAL



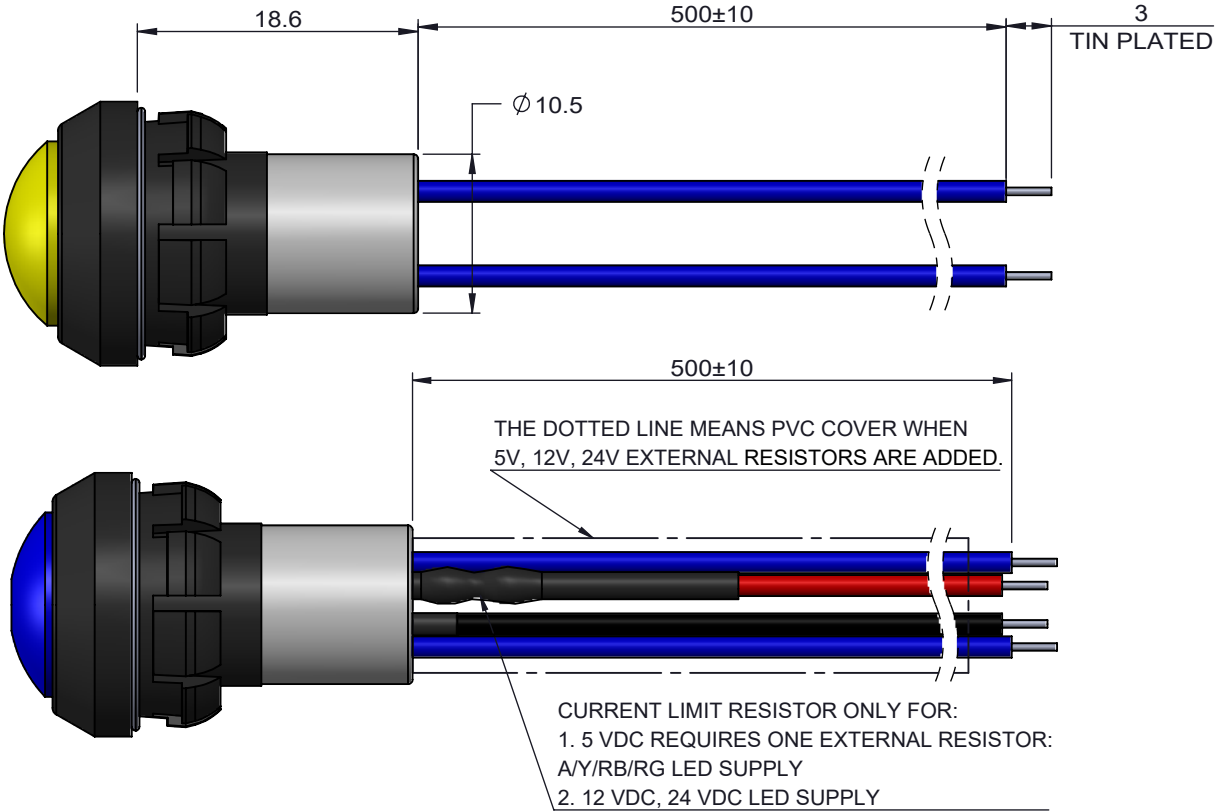
PC TERMINAL



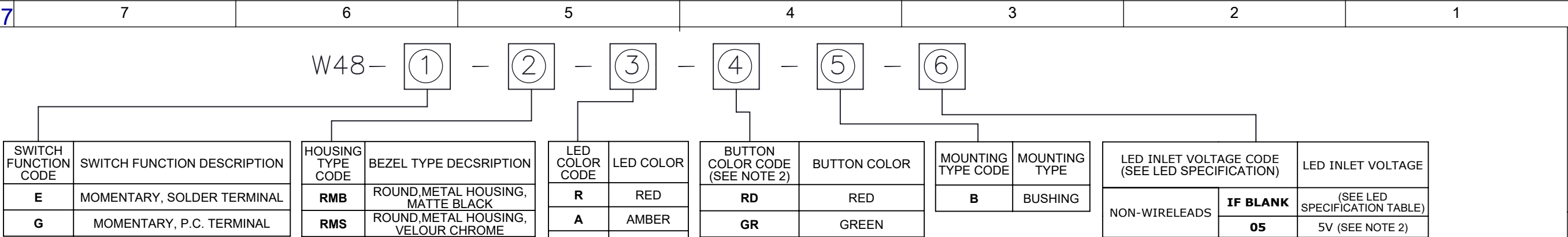
HIGH BUTTON

BUTTON TYPE	FP(mm)
NON-ILLUMINATION	8.8±0.5
ILLUMINATION: LIGHT PIPE BUTTON	7.9±0.5
HIGH BUTTON	10.8±0.5

WIRELEADS



DWG TYPE SALES DRAWING	DRAWN <i>K.Y.</i>	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5 X.XX ± 0.25 ANGULAR ± 5°	DWG TITLE W48-RM SERIES ,MECHANICAL MOMENTARY/MAINTAINED		
STATUS RELEASE	REVIEW <i>v.w.</i>	THIRD ANGLE PROJECTION 	DWG NO. W48-A,B,E,F,G,H-RM		
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			Unit mm	SCALE -	REV 3
			RoHS Compliant		SHEET 3 OF 4



MECHANICAL CHARACTERISTICS:

SWITCH CIRCUITRY: SPST-NO-DB
SWITCH ACTION: MOMENTARY
BUTTON TRAVEL: 2.3mm [.09] NOMINAL
OPERATING FORCE: 306g [3N] NOMINAL
PANEL THICKNESS: 0.5 - 3.0mm [.02 - .12]
CONTACTS: GOLD PLATED
LIFE(MECHANICAL): 1,000K CYCLES
NUT TORQUE FORCE: MAX 6 kgf*cm [5.2 LB*in]

ENVIRONMENTAL SPECIFICATIONS:

ACTUATOR INGRESS PROTECTION: IP67
OPERATING TEMPERATURE:
MOMENTARY: -40°C to +85°C [-40°F to +185°F]

ELECTRICAL SPECIFICATIONS:

CURRENT RATINGS: 10mA@12VDC, 1000K CYCLES NOMINAL
DIELECTRIC STRENGTH: 1,000VAC
INSULATION RESISTANCE: 1G OHM
CONTACT RESISTANCE:
50m OHMS MAX INITIAL

LED SPECIFICATIONS:

CURRENT LIMITING RESISTOR IS REQUIRED TO LIMIT
LED FORWARD CURRENT TO 20mA.
LED CHARACTERISTICS SEE LED SPECIFICATION TABLE

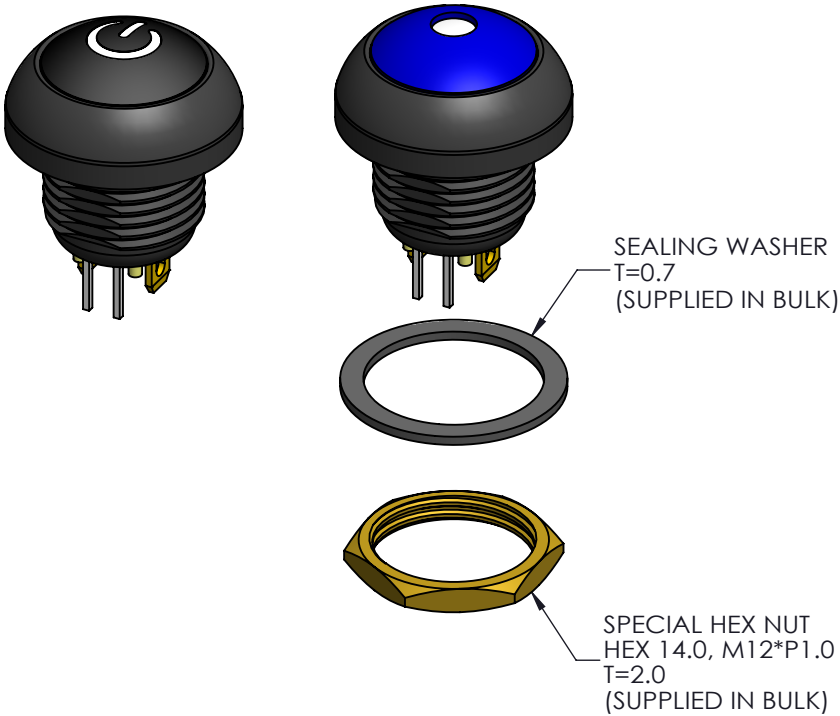
NOTE:

- SUPPLY HEX NET AND SEALING WASHER BULK IN PACKED
- INNER RESISTOR ONLY FOR LED: RED / BLUE / GREEN / WHITE

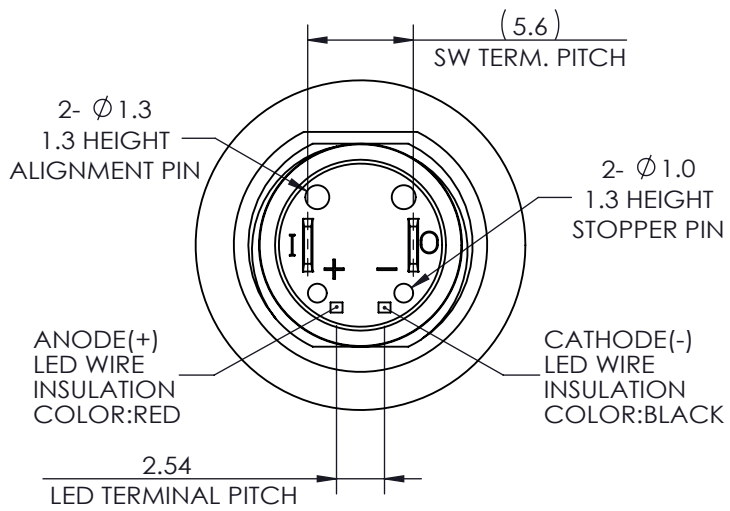
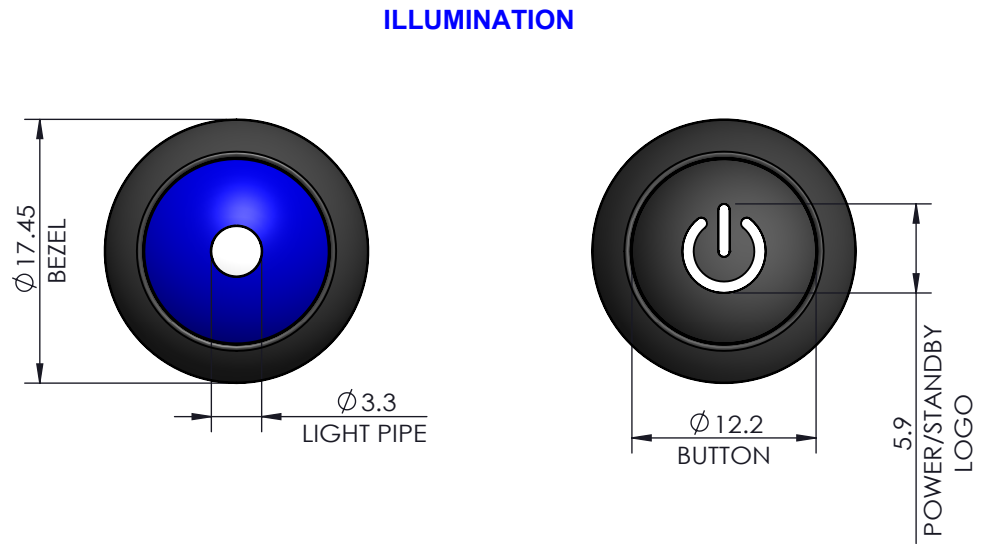
LED SPECIFICATION				
LED CODE	LED SINGLE COLOR		Vf(VDC)	If (mA)
			TYP.	
R	RED		2.0	20
A	AMBER		2.0	20
Y	YELLOW		2.0	20
G	GREEN		3.0	20
B	BLUE		3.1	20
W	WHITE		3.3	20
LED CODE	BICOLOR LED		Vf(VDC)	If (mA)
	COLOR 1	COLOR 2	TYP.	
RB	RED	BLUE	2.0 (RED) 3.3 (BLUE)	20
RG	RED	GREEN	2.0 (RED) 3.4 (GREEN)	20

Notes:
Hand Soldering Temperature (4mm above from Body) : 320°C for 3 seconds

BUSHING TYPE

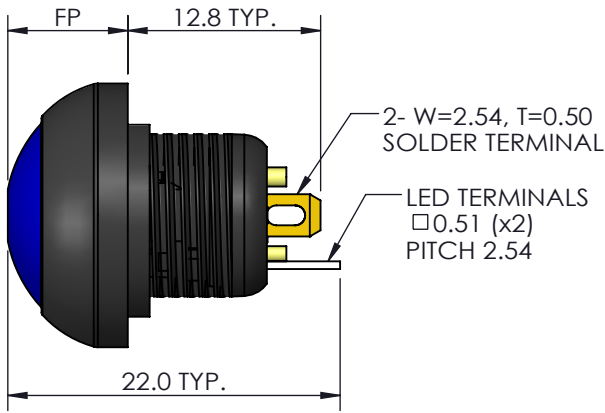


DWG TYPE SALES DRAWING	DRAWN c.c.	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5 X.XX ± 0.2 ANGULAR ±1°	DWG TITLE W48-MECHANICAL MOMENTARY, METAL HOUSING, CENTER SPOT/POWER STANDBY SYMBOL ILLUMINATION					
STATUS RELEASE	REVIEW --		DWG NO. W48-E,G-RMX					
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	DATE 2020.07.09	REF: S48-1, 2, 5, 6, A, B						

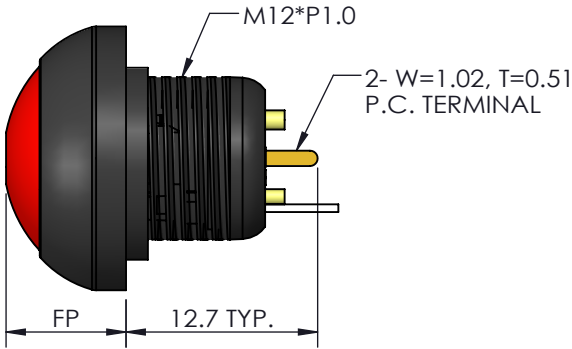


DETAIL FOR TERMINAL POSITION

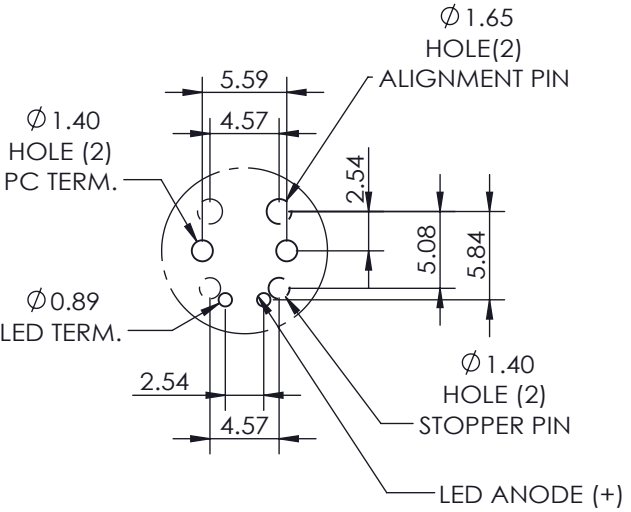
SWITCH ACTION	BUTTON TYPE	FP (mm)
MOMENTARY	ILLUMINATION LIGHT PIPE BUTTON	7.6±0.5



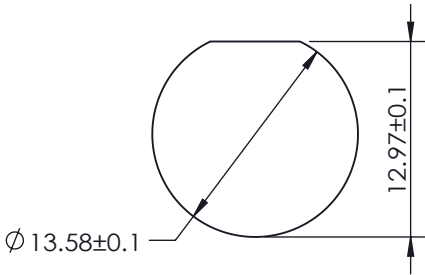
**ILLUMINATION
SOLDER TERMINAL**



ILLUMINATION P.C. TERMINAL

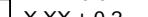


RECOMMENDED P.C. BOARD HOLE PATTERN
(FOR PC TERMINAL) COMPONENT SIDE



**RECOMMENDED
PANEL CUT-OUT**

PANEL THICKNESS: 0.5 TO 3mm

DWG TYPE SALES DRAWING	DRAWN c.c.	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5 X.XX ± 0.2 ANGULAR ±1°	DWG TITLE W48-MECHANICAL MOMENTARY, METAL HOUSING, CENTER SPOT/POWER STANDBY SYMBOL ILLUMINATION					
STATUS RELEASE	REVIEW --		DWG NO. W48-E,G-RMX					
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	DATE 2020.07.09	REF: S48-1, 2, 5, 6, A, B	☒ 管制文件 ☐ 非管制文件	Unit mm	SCALE 2 : 1	REV 4		