



Feature -

- good actuation feeling
- full color LED illuminated available
- long electrical life cycles
- SPDT or DPDT, lock / non-lock function

Application -

- instrumentation
- communication equipments

SPECIFICATIONS

SWITCH SPECIFICATIONS	
POLE - POSITION	ON - < ON > for Momentary Type , ON - ON for Self - Lock Type SPDT , DPDT
CONTACT RATING	SEE CONTACT MATERIAL
CONTACT RESISTANCE	50 mΩ MAX. (SILVER CONTACT) ; 100 mΩ MAX. (GOLD PLATING CONTACT) , 1.5 V DC ; 100 mA , by Method of Voltage DROP
INSULATION RESISTANCE	100 MΩ MIN. 500 V DC
DIELECTRIC STRENGTH	Breakdown is not Allowable ; 1000 V AC for 1 Minute
OPERATING FORCE	200 ± 100 gf (SPDT) 300 ± 150 gf (DPDT)
OPERATING LIFE	200,000 cycles (SILVER CONTACT) 200,000 cycles (GOLD PLATING CONTACT)
OPERATING TEMPERATURE RANGE	-20°C ~ 70°C
TOTAL TRAVEL	2.2 ± 0.2 mm

LED SPECIFICATIONS		Value / LED Color			
	Unit				
		Red	Yellow	Green	Blue
FORWARD CURRENT	If	20	20	20	20
REVERSE VOLTAGE	Vr	5.0	5.0	5.0	5.0
REVERSE CURRENT	Ir	10	10	10	10
FORWARD VOLTAGE@20mA	Vf	1.7-2.2	1.7-2.2	1.8-2.4	2.7-3.7
LUMINOUS INTENSITY@20mA	Iv	230	230	410	585

Physical and electrical information of LED will be provided upon customer's request on switches .

HOW TO ORDER

L	-	MH	1	P	N	R	3	R	3	Q	-			
---	---	----	---	---	---	---	---	---	---	---	---	--	--	--

POLE

1	1 POLE (std.)
2	2 POLE

OPERATION

N	NON - LOCK (std.)
L	LOCK TYPE (MH , ML , MHB , E TYPE)

CHIP QTY.

3	3 CHIPS
2	2 CHIPS
1	1 CHIP
X	WITHOUT
-	WHEN RGB

LED COLOR

B	BLUE
G	GREEN
R	RED
Y	YELLOW
X	WITHOUT
-RGB	FULL COLOR

FRAME TYPE

MH	MH TYPE	MHC	PROTECTIVE GUARD	MHCM	MANUAL PROTECTIVE GUARD
ML	ML TYPE	MLC	PROTECTIVE GUARD	MLCM	MANUAL PROTECTIVE GUARD
S	S TYPE	SC	PROTECTIVE GUARD	SCM	MANUAL PROTECTIVE GUARD
E	E TYPE	EC	PROTECTIVE GUARD	ECM	MANUAL PROTECTIVE GUARD
B	B TYPE	F	F TYPE	MHB	MHB TYPE

TERMINAL

P	P.C.B TYPE (std.)
W	WIRE TYPE

DIFFUSER PLATE COLOR

	WHITE (std.)
R	RED
G	GRAY
B	BLUE
Y	YELLOW
N	GREEN
W	WHITE (When Indicate the cap color)

CAP COLOR

	TRANSPARENT(std.)
R	RED
G	GRAY
B	BLUE
Y	YELLOW
N	GREEN
T	TRANSPARENT (When Indicate the diffuser color)
S	SILVER

CONTACT MATERIAL

Q	MOVING CONTACTS : COPPER GOLD PLATING TERMINALS : SILVER PLATED . FIXED CONTACTS : BRASS , SILVER PLATED . RATING : 25 V DC , 500 mA .
R	CONTACTS & TERMINALS : COPPER , GOLD PLATED . RATING : 28 V DC , 100 mA .

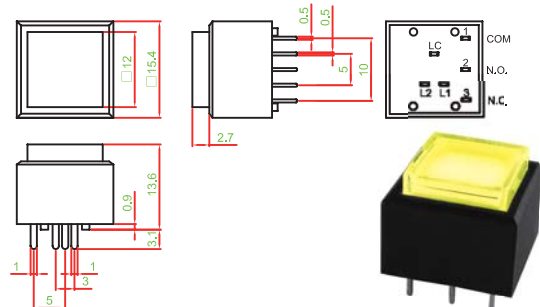
CAP SYMBOL
Please refer to appendix 1(knob)

For example	
K3	PK3:Printing K3:Laser carving
E1	PE1:Printing E1:Laser carving
	WITHOUT

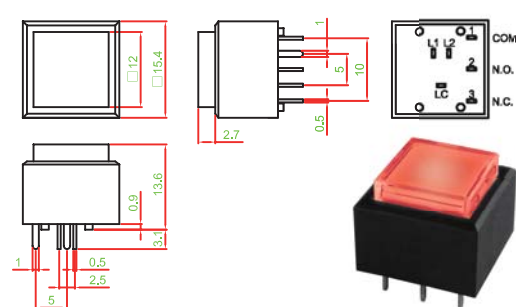


► DIMENSION & FRAME TYPE

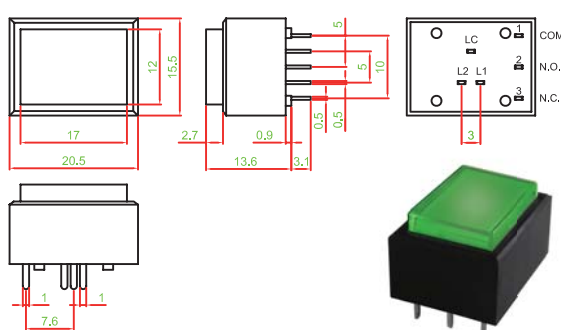
L - S1PN □□□□ Q



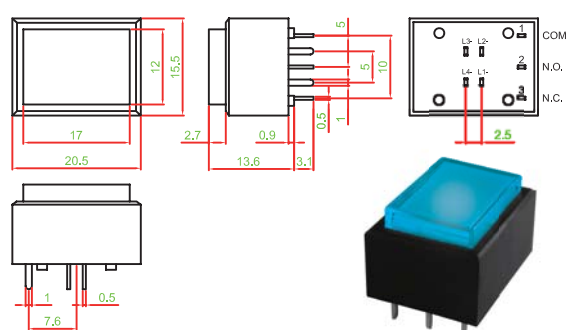
L - ML1PN □□□□ Q



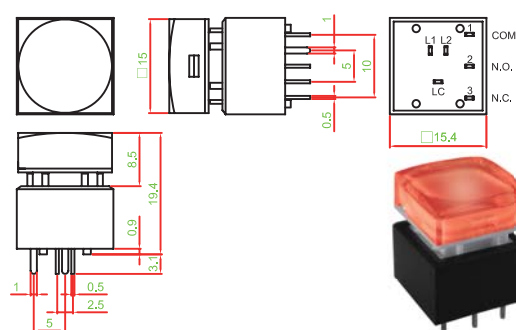
L - B1PN □□□□ Q



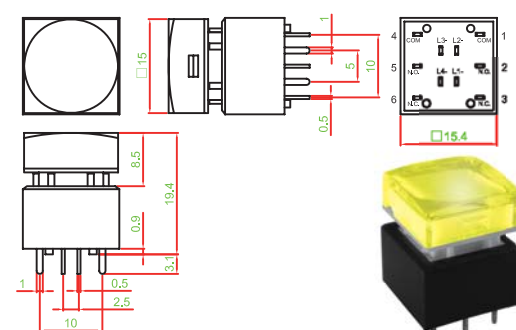
L - B1PN-RGB-Q



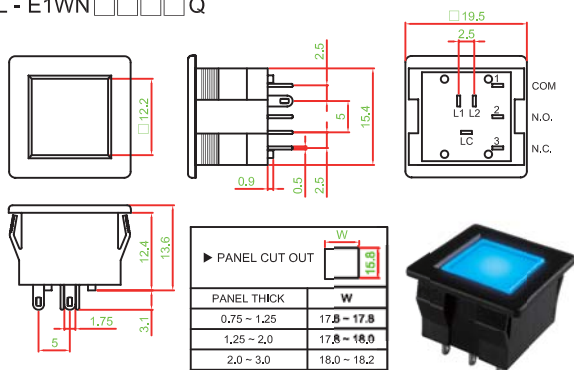
L - MH1PN □□□□ Q



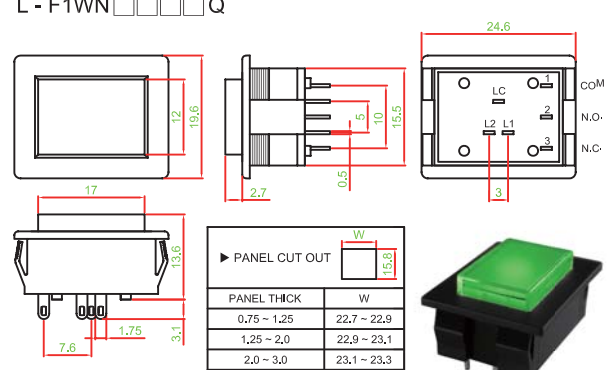
L - MH2PN-RGB-Q



L - E1WN □□□□ Q

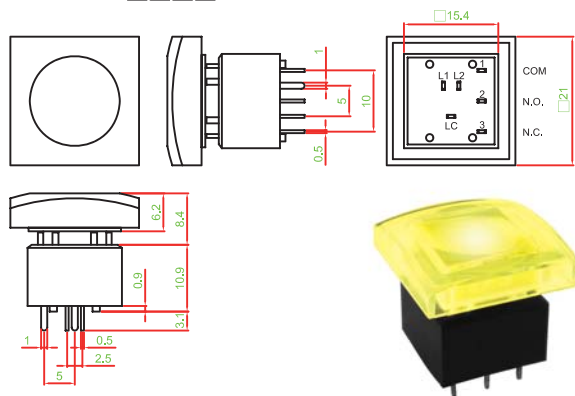


L - F1WN □□□□ Q

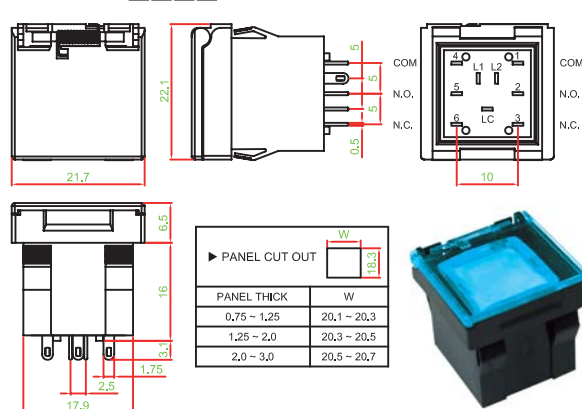


► DIMENSION & FRAME TYPE

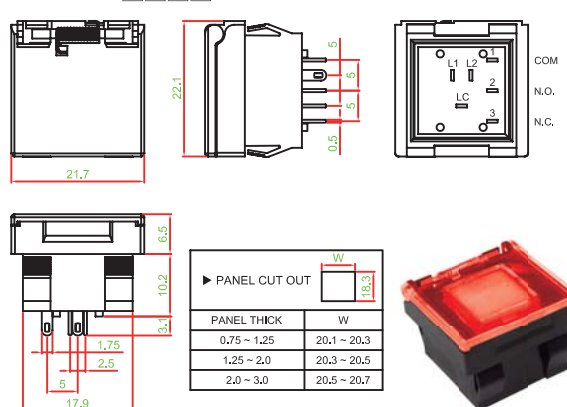
L - MHB1PN □ □ □ □ Q



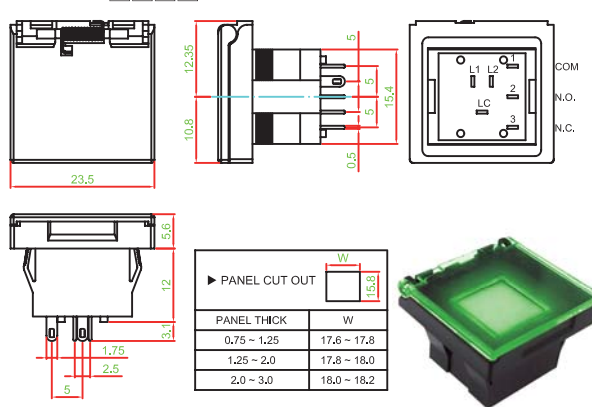
L - MHC2WN □ □ □ □ Q



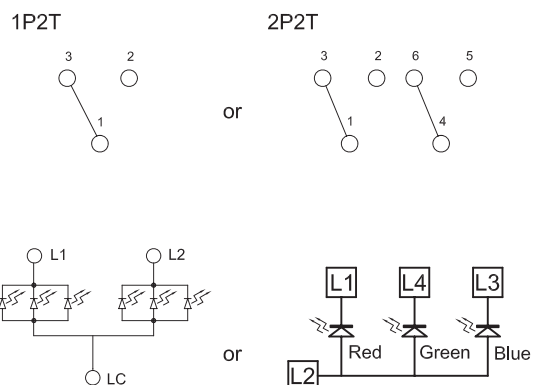
L - MLC1WN □ □ □ □ Q



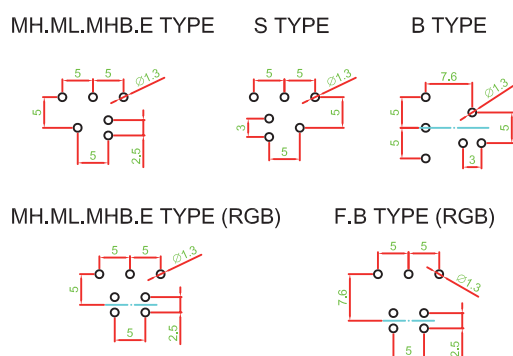
L - EC1WN □ □ □ □ Q



► SCHEMATIC



► P.C.B LAYOUT



► MATERIAL

- COVER : PC
- BASE FRAME : PA + GF
- ACTUATOR : POM
- TERMINAL : Q : BRASS SILVER PLATING
R : BRASS GOLD PLATING

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
A	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
B	A	B	C	D	E	F	G	H	I	J	CH5	CH6	DSK	PIP	C-KEY	CUT	TAKE	REC	ENG	PROD
C	K	L	M	N	O	P	Q	R	S	T	REPLAY	RET1	RET2	KEY ON	AUTO TAKE					
D	U	V	W	X	Y	Z	POWER	ON OFF	ON	OFF		USER A	USER B	USER C	USER D	USER E	USER F	USER G	USER H	USER I
E	OK		Auto	Enter	Start	STOP	OPEN	CLOSE	Exit	Move	USER J									
F	SET	Reset	Light	Alarm	Menu	Next	Back	Delete	Motor	Save										
G	Up	Down	Right	Left	Test	End	Insert	Lock	Print	+/-										
H	ESC	BC	HOME	Health	D-LED 2	OC GENIE	VIDEO INPUT	clr CMOS	Green Power	Save OK										
I	B/R	Undo Cancel	T/L	F1	F2	F3	F4	F5	F6	F7										
J	F8	F9	F10	F11	F12	F13	F14	IN 1	IN 2	IN 3										
K	IN 4	IN 5	IN 6																	
L	+	-	x	÷	=	↑	→	▲	▶	▶										
M																				
N	↑	→	▲	◀	▶	◀	▶	◀	▶	◀										
O																				
P							Config	TIME LINE	ME1	ME2										
Q	ME3	ME4	BGND 3D DVE1	BGND 3D DVE2	BUS COLOR	ME BUTTON LINK	*	INSERT	WIPE											
R	⏮	ALL		VP		COPY		RECORD MODE	↑											
S			MUTE																	
T																				
U			chair																	
V			OC			CLEAR	CROSS WIND	AMMO TEMP	BARO PRESS	AIR TEMP										
W	BORE-SIGHT	CANT	LEAD	RANGE	MRS	ZERO	TEST	UD	LR											
X	ID	Disp		GALL		BAND	SETUP	MODE	LINK	FUNC										
Y	SHIFT					DEL														
Z				RUN	2D	3D	CH1	CH2	CH3	CH4										