



**Feature -**

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

**Application -**

- instrumentation
- communication equipments

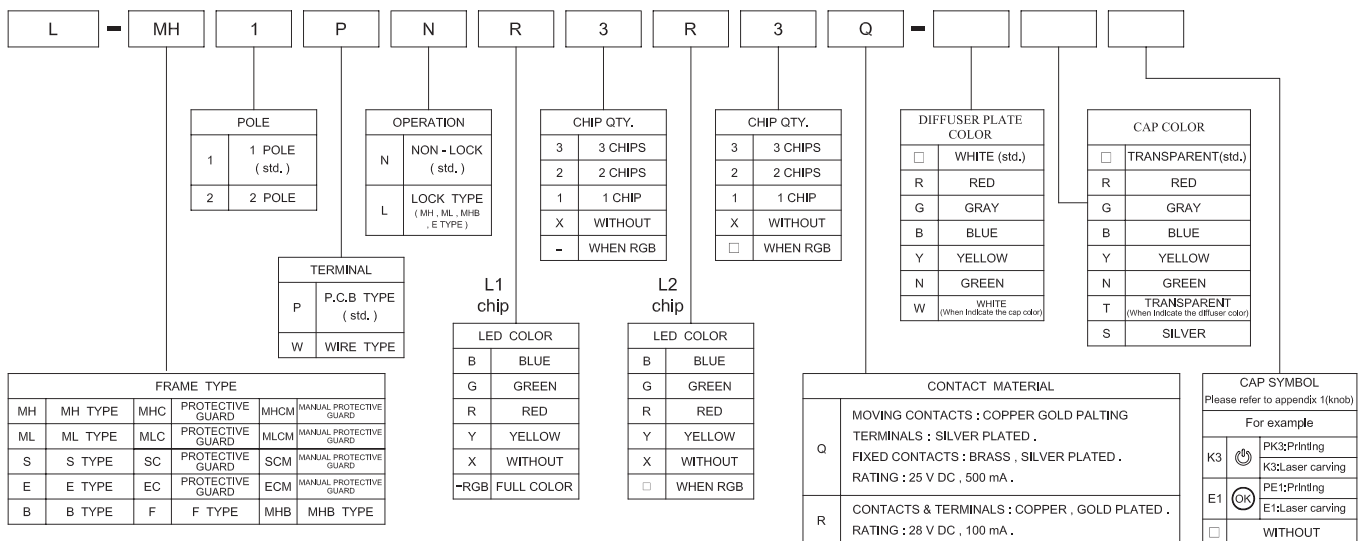
**SPECIFICATIONS**

| SWITCH SPECIFICATIONS       |  |
|-----------------------------|--|
| POLE - POSITION             | ON - < ON > for Momentary Type ,<br>ON - ON for Self - Lock Type<br>SPDT , DPDT  |
| CONTACT RATING              | SEE CONTACT MATERIAL   |
| CONTACT RESISTANCE          | 50 mΩ MAX. ( SILVER CONTACT ) ;<br>100 mΩ MAX. ( GOLD PLATING CONTACT ) ,<br>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 ;<br>1000 V AC for 1 Minute   |
| OPERATING FORCE             | 200 ± 100 gf ( SPDT )<br>300 ± 150 gf ( DPDT )   |
| OPERATING LIFE              | 200,000 cycles ( SILVER CONTACT )<br>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  |
| 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   | mcd               | 230     | 230     | 410     | 585 |

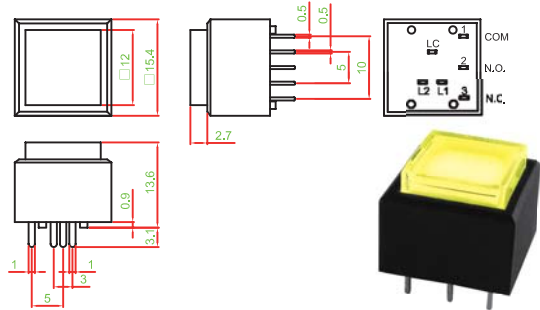
Physical and electrical information of LED will be provided upon customer's request on switches .

**HOW TO ORDER**

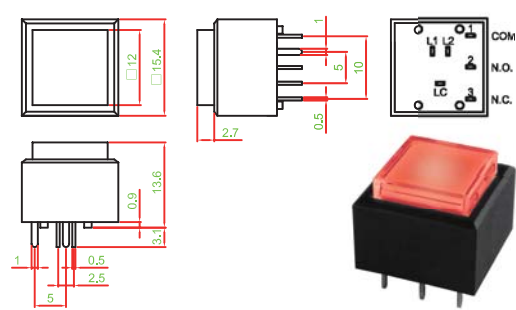


▶ DIMENSION & FRAME TYPE

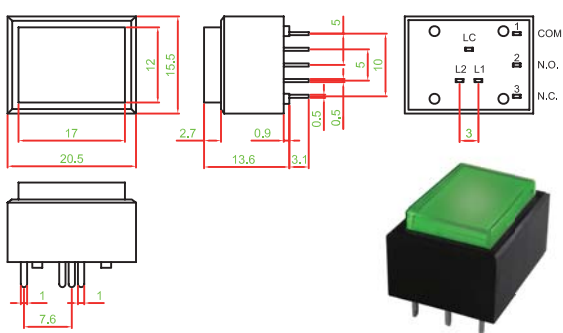
L - S1PN □□□□ Q



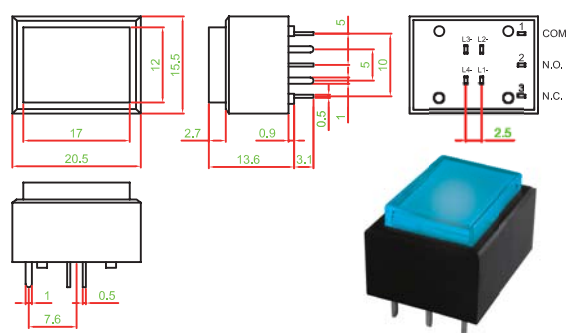
L - ML1PN □□□□ Q



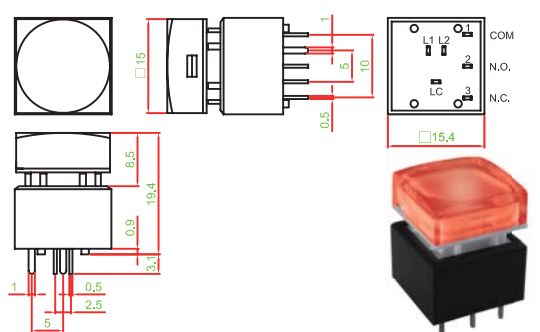
L - B1PN □□□□ Q



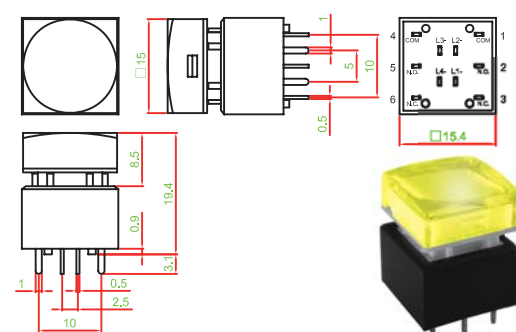
L - B1PN-RGB-Q



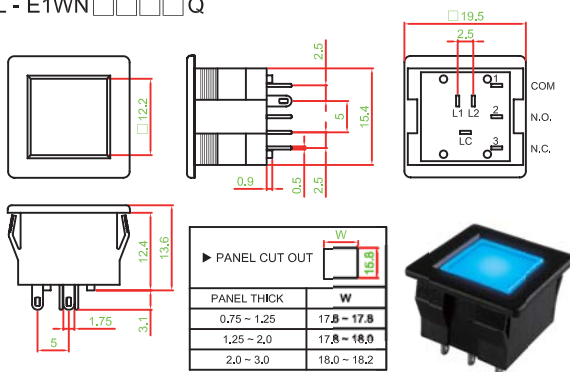
L - MH1PN □□□□ Q



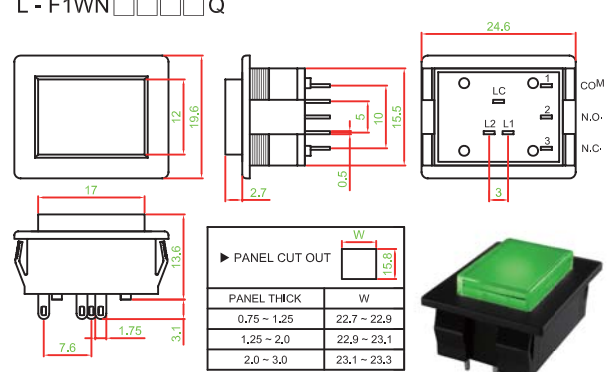
L - MH2PN-RGB-Q



L - E1WN □□□□ Q

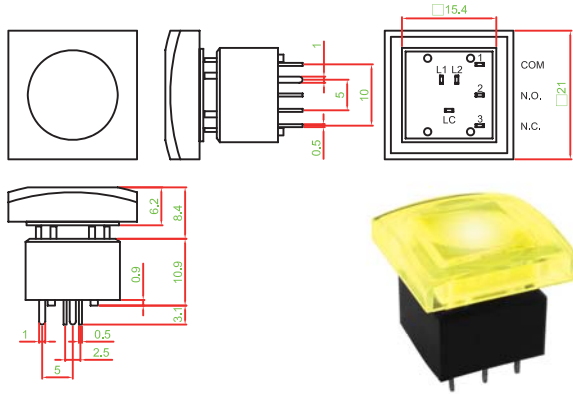


L - F1WN □□□□ Q

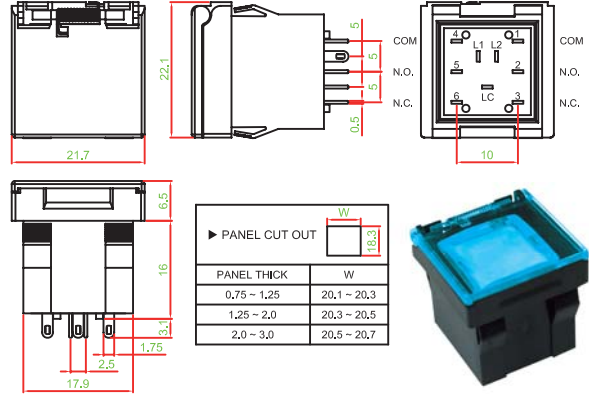


► DIMENSION & FRAME TYPE

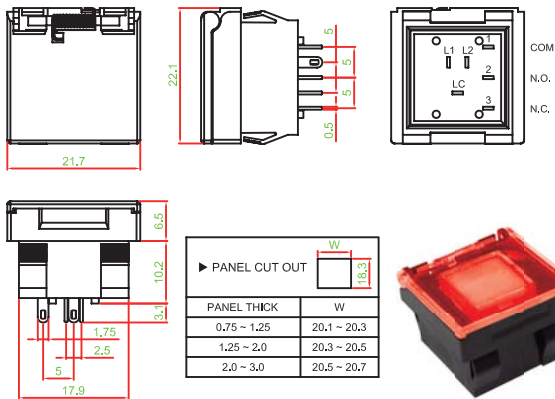
L - MHB1PN □□□□ Q



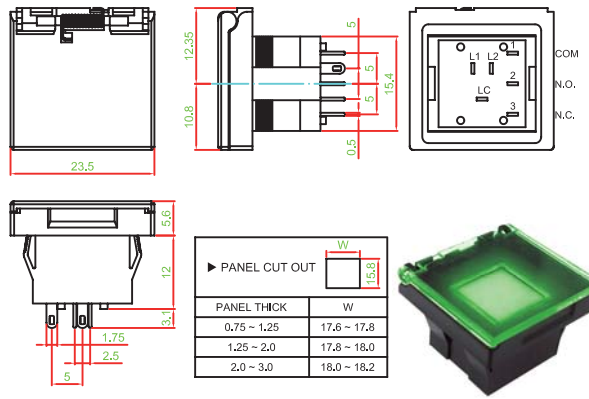
L - MHC2WN □□□□ Q



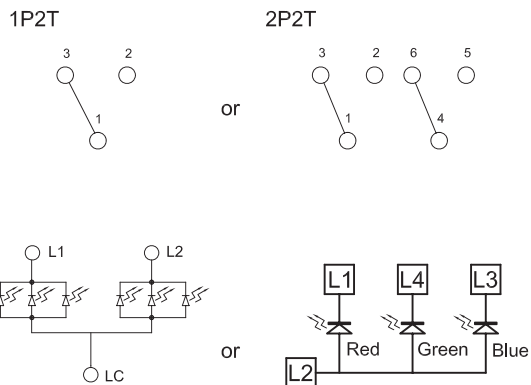
L - MLC1WN □□□□ Q



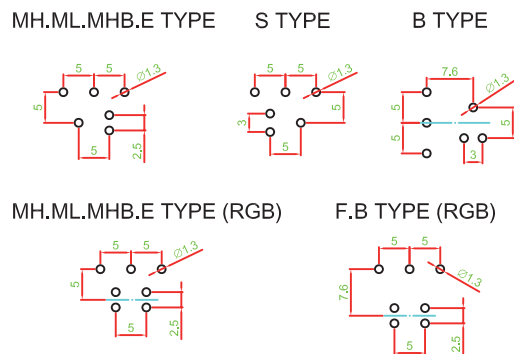
L - EC1WN □□□□ Q



► 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 |        |        |        |           |        |        |        | M-1    |        |  |
| 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        | amb          | med       | amb            | store       | store       |             |          |        |        |        |        |           |        |        |        |        |        |  |
| V |            |             |              |              |           | 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      |        |        |        |        |           |        |        |        |        |        |  |

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