

Illuminated Pushbutton

## Specifications

|                    |                          |                       |               |
|--------------------|--------------------------|-----------------------|---------------|
| Electrical Ratings | 500mA @ 24VDC            | Dielectric Strength   | 1000Vrms min  |
| Electrical Life    | 1,000,000 cycles typical | Insulation Resistance | >100MΩ min    |
| Contact Resistance | <50mΩ initial            | Operating Temperature | -40°C to 85°C |
| Actuation Force    | 200 ±50gF                | Storage Temperature   | -40°C to 85°C |
| Actuation Travel   | 2.2 ± .1mm               |                       |               |

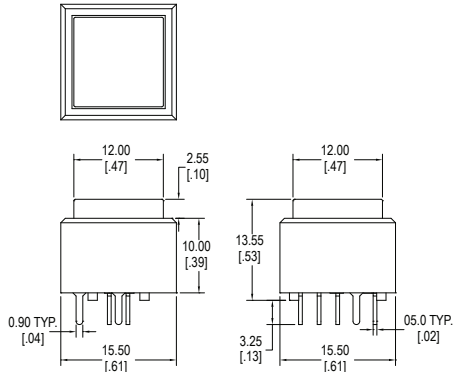
## Materials

|               |                                    |
|---------------|------------------------------------|
| Actuator Cap  | Poly Carbonate (PC)                |
| Actuator Body | Poly Carbonate (PC)                |
| Housing       | Polyamide (PA), UL94V-0            |
| Terminal Base | Polyamide (PA), UL94V-0            |
| Contacts      | Brass Rivet, Silver or Gold Plated |
| Terminals     | Brass, Silver or Gold Plated       |

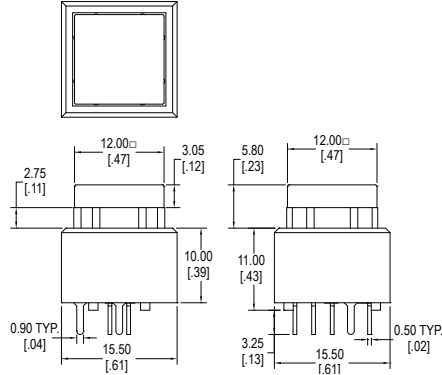
## Ordering Information

|  |                 |                   |                   |   |   |    |     |
|--|-----------------|-------------------|-------------------|---|---|----|-----|
| 1. Series                                    | JC              | V                 | 1                 | RR  | R | 33 | MSJ |
| JC   |                 |                   |                   |   |   |    |     |
| 2. Actuator Options                          |                 |                   |                   |   |   |    |     |
| S = Square                                   |                 |                   |                   |   |   |    |     |
| H = Extended Square                          |                 |                   |                   |   |   |    |     |
| R = Rectangle                                |                 |                   |                   |   |   |    |     |
| V = Square, concave                          |                 |                   |                   |   |   |    |     |
| Q = Square, concave                          |                 |                   |                   |   |   |    |     |
| PS = Square, panel mount                     |                 |                   |                   |   |   |    |     |
| PH = Extended Square, panel mount            |                 |                   |                   |   |   |    |     |
| 3. Number of Poles                           |                 |                   |                   |   |   |    |     |
| 1 = SPDT                                     |                 |                   |                   |   |   |    |     |
| 2 = DPDT                                     |                 |                   |                   |   |   |    |     |
| 4. Latching Option                           |                 |                   |                   |   |   |    |     |
| Blank = Momentary                            |                 |                   |                   |   |   |    |     |
| L = Latching **Not available with R actuator |                 |                   |                   |   |   |    |     |
| 5. LED Color                                 | BB = Blue       | RB = Red/Blue     | YW = Yellow/White |   |   |    |     |
| RR = Red                                     | WW = White      | RW = Red/White    | GB = Green/Blue   |   |   |    |     |
| GG = Green                                   | RY = Red/Yellow | YG = Yellow/Green | GW = Green/White  |   |   |    |     |
| YY = Yellow                                  | RG = Red/Green  | YB = Yellow/Blue  | BW = Blue/White   |   |   |    |     |
| RGB = Red/Green/Blue                         |                 |                   |                   |   |   |    |     |
| 6. Contact Material                          |                 |                   |                   |   |   |    |     |
| Q = Silver                                   |                 |                   |                   |   |   |    |     |
| R = Gold                                     |                 |                   |                   |   |   |    |     |
| 7. Diffuser Color Options                    |                 |                   |                   | 8. Actuator Color Options **available only with V & Q actuators |   |    |     |
| Blank = White (standard)                     |                 |                   |                   | Blank = Clear (standard)  |   |    |     |
| 3 = Red                                      |                 |                   |                   | 3 = Red   |   |    |     |
| 4 = Yellow                                   |                 |                   |                   | 4 = Yellow  |   |    |     |
| 5 = Green                                    |                 |                   |                   | 5 = Green   |   |    |     |
| 7 = Blue                                     |                 |                   |                   | 7 = Blue  |   |    |     |
| 9. Laser Etching Colors                      |                 |                   |                   | 10. Laser Etching Styles  |   |    |     |
| Blank = No laser etching color               |                 |                   |                   | Blank = No laser etching style                                  |   |    |     |
| MS = Misty Silver                            |                 |                   |                   | A C E G I K   |   |    |     |
| B = Black                                    |                 |                   |                   | B D F H J L   |   |    |     |

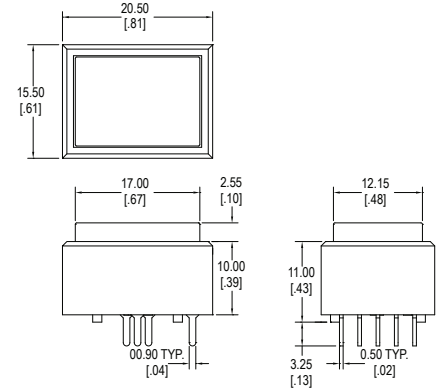
### Dimensions



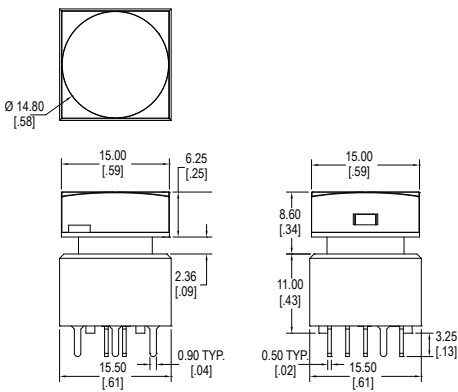
**S = Square**



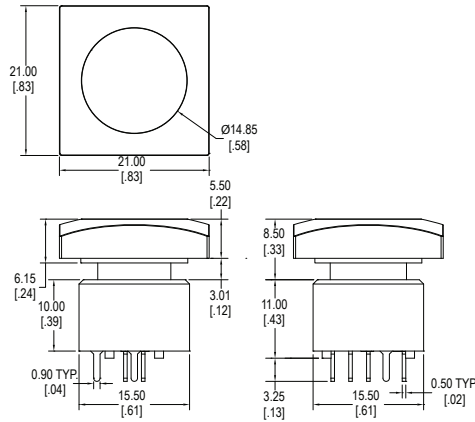
**H = Extended Square**



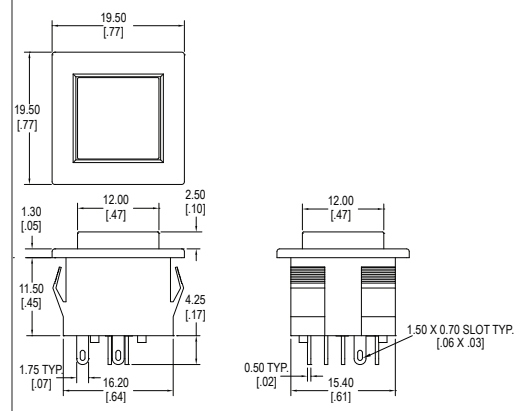
**R = Rectangle**



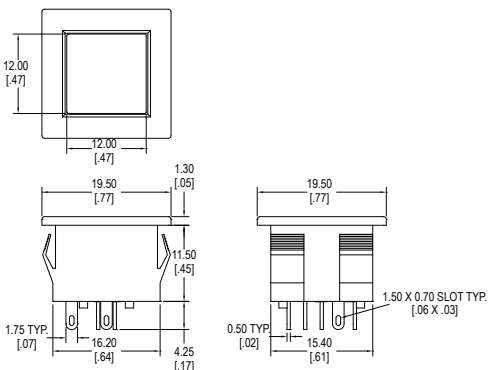
**V = Square, Concave**



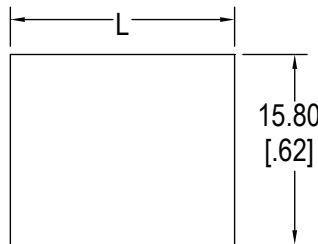
**Q = Square, Concave**



**PH = Square, Panel Mount**



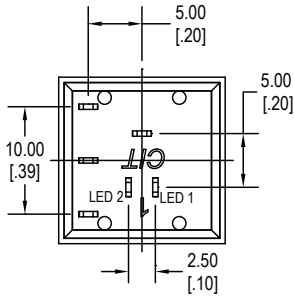
**PS = Square, Panel Mount**



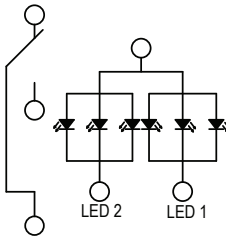
**Panel Cut-Out**

| Panel Thickness | "L"           |
|-----------------|---------------|
| 0.75 - 1.25mm   | 18.0 - 18.2mm |
| 1.25 - 2.00mm   | 18.2 - 18.4mm |
| 2.00 - 3.00mm   | 18.4 - 18.6mm |

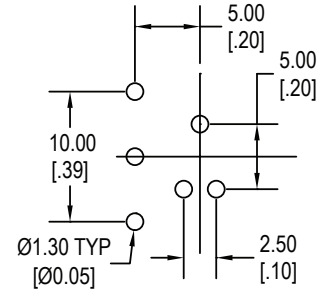
### Bottom Views, Schematics & PC Layouts



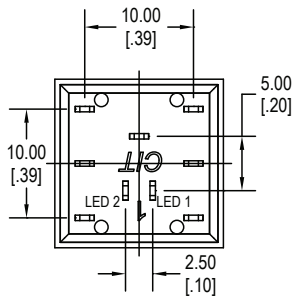
**JC S, H, V & Q (SPDT)  
Bottom View**



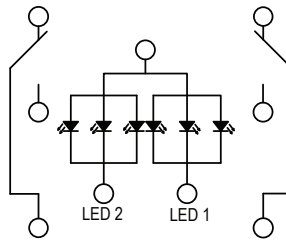
**JC S, H, V & Q (SPDT)  
Schematic**



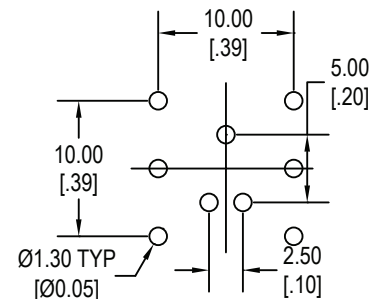
**JC S, H, V & Q (SPDT)  
PC Layout**



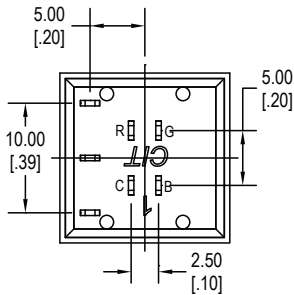
**JC S, H, V & Q (DPDT)  
Bottom View**



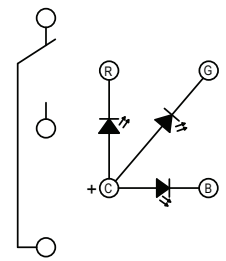
**JC S, H, V & Q (DPDT)  
Schematic**



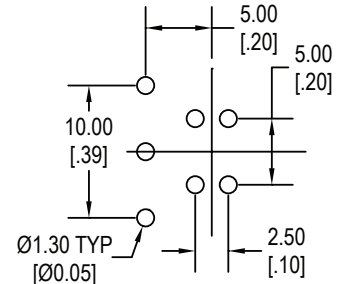
**JC S, H, V & Q (DPDT)  
PC Layout**



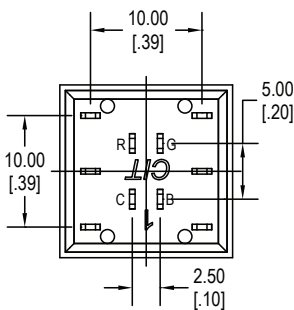
**JC S, H, V & Q (SPDT)  
RGB Bottom View**



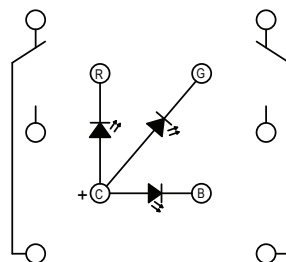
**JC S, H, V & Q (SPDT)  
RGB Schematic**



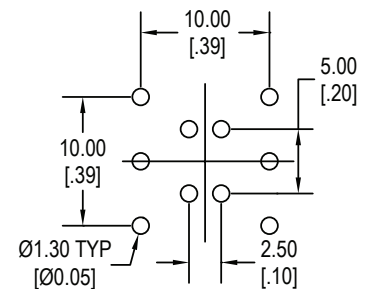
**JC S, H, V & Q (SPDT)  
RGB PC Layout**



**JC S, H, V & Q (DPDT)  
RGB Bottom View**

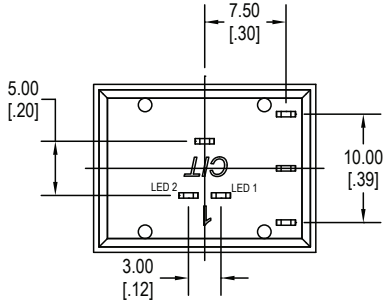


**JC S, H, V & Q (DPDT)  
RGB Schematic**

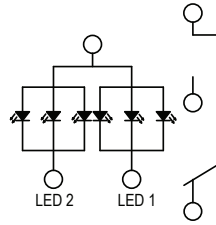


**JC S, H, V & Q (DPDT)  
RGB PC Layout**

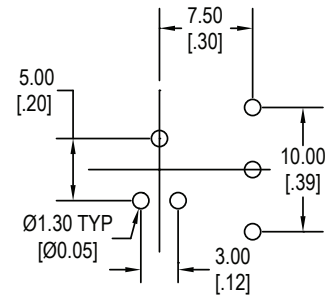
**Bottom Views, Schematics & PC Layouts**



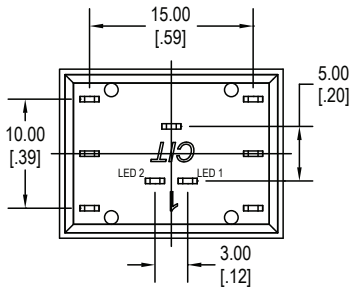
**JC R (SPDT)  
Bottom View**



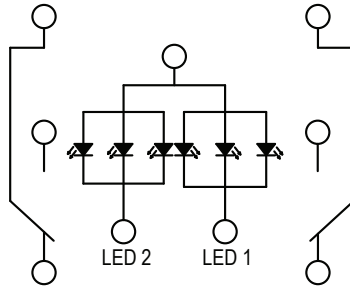
**JC R (SPDT)  
Schematic**



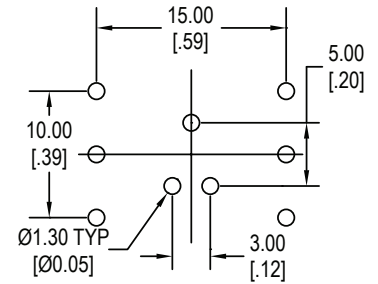
**JC R (SPDT)  
PC Layout**



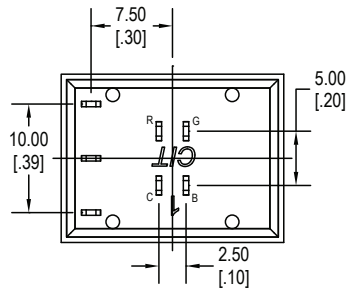
**JC R (DPDT)  
Bottom View**



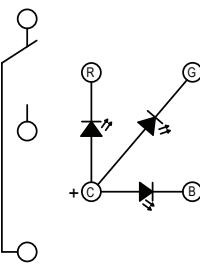
**JC R (DPDT)  
Schematic**



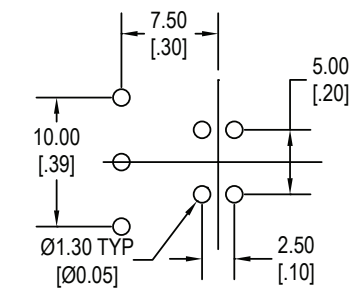
**JC R (DPDT)  
PC Layout**



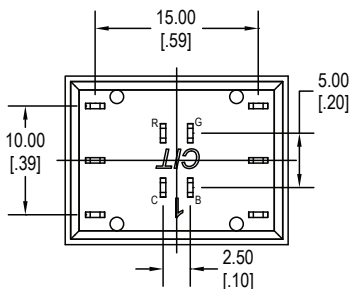
**JC R (SPDT)  
RGB Bottom View**



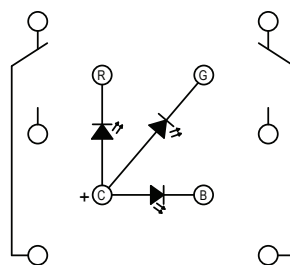
**JC R (SPDT)  
RGB Schematic**



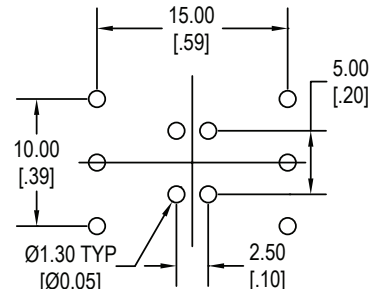
**JC R (SPDT)  
RGB PC Layout**



**JC R (DPDT)  
RGB Bottom View**

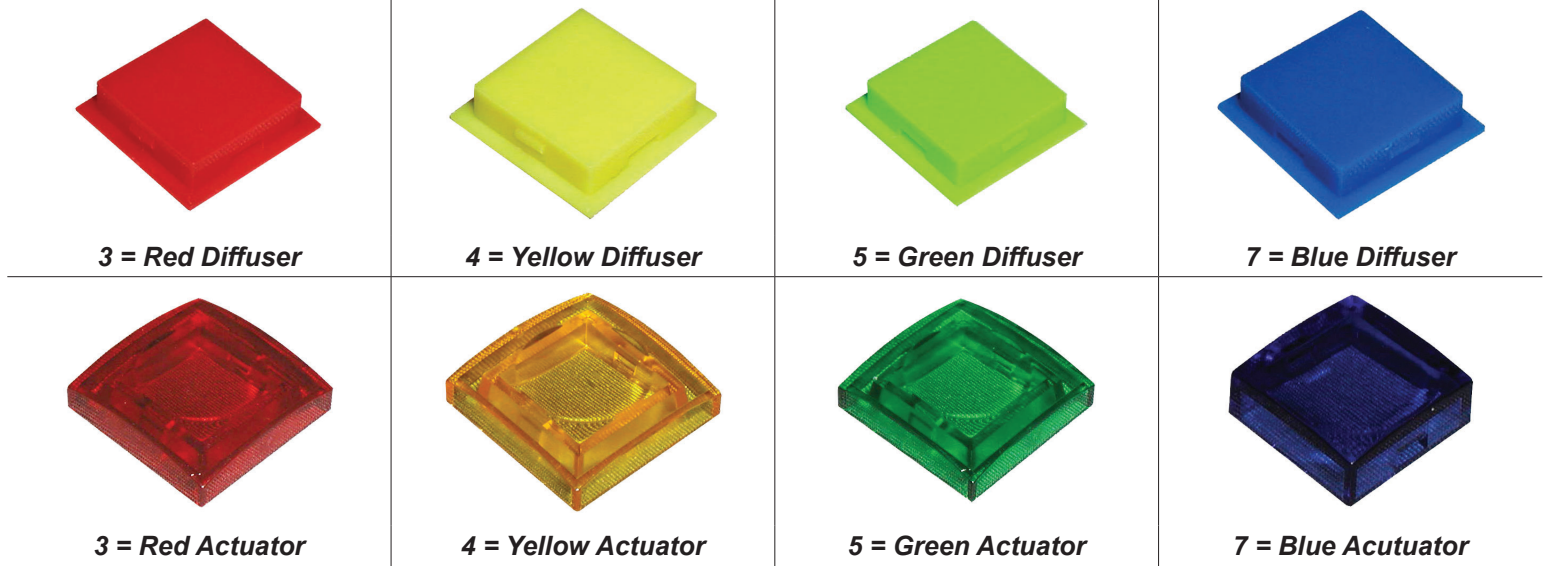


**JC R (DPDT)  
RGB Schematic**

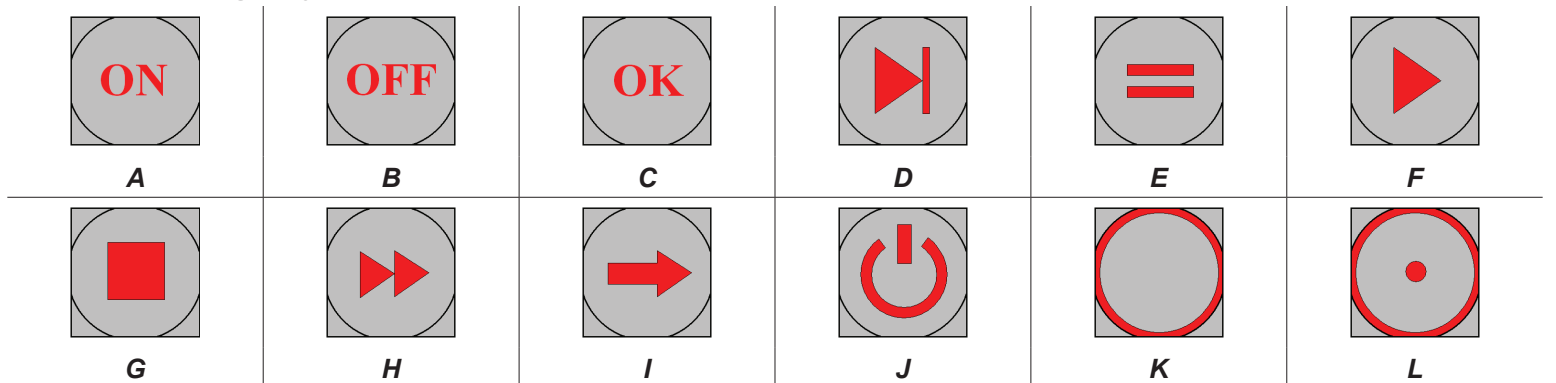


**JC R (DPDT)  
RGB PC Layout**

### Actuators & Diffuser Styles



### Laser Etching Styles

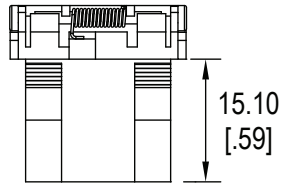
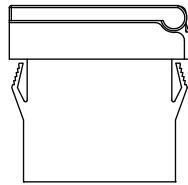
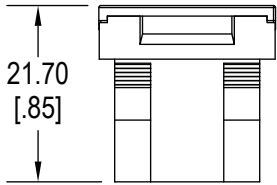
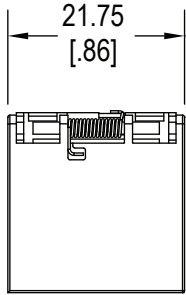


### LED Characteristics

| LED Ratings                                |                 | Color     |     |     |     |     | Units       |
|--|-----------------|-----------|-----|-----|-----|-----|-------------|
|  |                 | R         | G   | Y   | B   | W   |             |
| Reverse Voltage                            | $V_R$           | 5         | 5   | 5   | 5   | 5   | V           |
| Forward Current (avg)                      | $I_F$           | 30        | 30  | 30  | 30  | 30  | mA          |
| Forward Current (peak)                     | $I_{FS}$        | 100       | 120 | 100 | 100 | 100 | mA          |
| Reverse Current $V_R = 5V$                 | $I_R$           | 10        | 10  | 10  | 10  | 10  | $\mu A$     |
| Power Dissipation                          | $P_T$           | 100       | 100 | 100 | 120 | 120 | mW          |
| Operating & Storage Temperature            | $T_A$           | -40 ~ +85 |     |     |     |     | $^{\circ}C$ |
| Forward Voltage (typ) $I_F = 20mA$         | $V_F$           | 1.7       | 1.7 | 1.7 | 3.5 | 3.5 | V           |
| Forward Voltage (max) $I_F = 20mA$         | $V_F$           | 2.6       | 2.6 | 2.6 | 4.0 | 4.0 | V           |
| Wavelength at Peak Emmission, $I_F = 20mA$ | $\lambda_P$     | 697       | 565 | 585 | 470 | n/a | nm          |
| Spectral Line Half-Width, $I_F = 20mA$     | $\Delta\lambda$ | 20        | 20  | 20  | 25  | n/a | nm          |
| Luminous Intensity, $I_F = 20mA$           | LI              | 171       | 171 | 171 | 450 | 400 | mcd         |
| Viewing Angle                              | $\Theta$        | 50        | 50  | 50  | 50  | 50  | deg         |

**Switch Guard**

*With Spring Loaded Clear Cover*



| PANEL THK   | L           |
|-------------|-------------|
| 0.75 - 1.25 | 20.1 - 20.3 |
| 1.25 - 2.0  | 20.3 - 20.5 |
| 2.0 - 3.0   | 20.5 - 20.7 |

