

# RAYCONN ELECTRONICS CO., LTD.

## SPECIFICATION FORM

### FEATURES

- ✧ 0.8 INCHES (20.40MM) DIGIT HEIGHT
- ✧ 20.0MM×27.70MM OUTLINE
- ✧ SINGLE DIGIT
- ✧ SINGLE COLOR
- ✧ EASY ASSEMBLY
- ✧ HIGH BRIGHTNESS
- ✧ SOLID STATE RELIABILITY

### DESCRIPTION

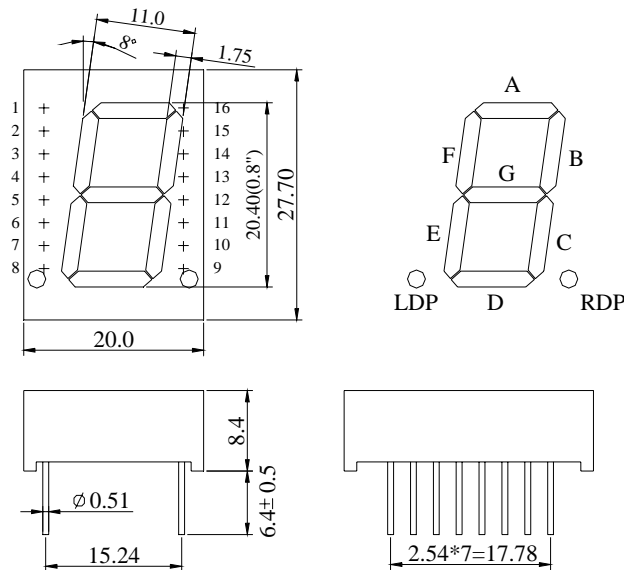
The REC-S8102ASR is a 0.8 inches (20.40mm) digit height, 20.0mm×27.70mm outline, single color, single digit with common anode numeric display. The REC-S8102ASR utilizes super-red LED chips fabricated from GaAlAs epiwafer on GaAs substrate grown by liquid phase epitaxy. These devices have black face with white segments.

### DEVICE

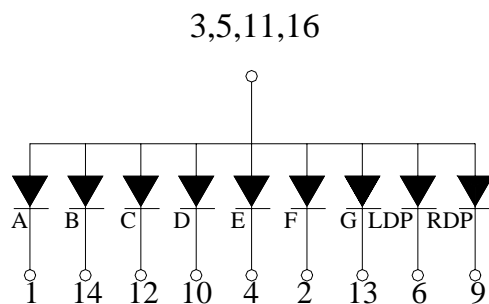
| PART NO.     | EMITTING COLOR | DESCRIPTION                    |
|--------------|----------------|--------------------------------|
| REC-S8102ASR | Yellow-Green   | Black Surface & White Segments |

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## PACKAGE DIMENSION



## INTERNAL CIRCUIT DIAGRAM



7,8 & 15 NO PIN

## PIN CONNECTION

| PIN NO. | CONNECTION   | PIN NO. | CONNECTION   |
|---------|--------------|---------|--------------|
| 1       | Cathode A    | 9       | Cathode RDP  |
| 2       | Cathode F    | 10      | Cathode D    |
| 3       | Common Anode | 11      | Common Anode |
| 4       | Cathode E    | 12      | Cathode C    |
| 5       | Common Anode | 13      | Cathode G    |
| 6       | Cathode LDP  | 14      | Cathode B    |
| 7       | No Pin       | 15      | No Pin       |
| 8       | No Pin       | 16      | Common Anode |

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## ABSOLUTE MAXIMUM RATING AT $T_A=25^{\circ}\text{C}$

| PARAMETER                                                                    | SYMBOL   | MAXIMUM            | UNIT |
|------------------------------------------------------------------------------|----------|--------------------|------|
| Power Dissipation per Seg.                                                   | $P_{AD}$ | 60                 | mW   |
| Peak Forward Current per Seg.                                                | $I_{PF}$ | 80                 | mA   |
| Continuous Forward Current per Seg.                                          | $I_{AF}$ | 20                 | mA   |
| Reverse Voltage per Seg.                                                     | $V_R$    | 5                  | V    |
| Operating Temperature Range, $T_{opr}$                                       |          | - 25° C to + 60° C |      |
| Storage Temperature Range, $T_{stg}$                                         |          | - 30° C to + 85° C |      |
| Solder Temperature : 1 / 16 inch below seating plane for 3 seconds at 260° C |          |                    |      |

## ELECTRO - OPTICAL CHARACTERISTICS AT $T_A=25^{\circ}\text{C}$

| PARAMETER                                                          | UNIT          | MIN  | TYPE | MAX   |
|--------------------------------------------------------------------|---------------|------|------|-------|
| Luminous Intensity per Seg., $I_V$ ( $I_F=20\text{mA}$ )           | mcd           | 8    | 10   | 14    |
| Peak Emission Wavelength, $\lambda_P$ ( $I_F=20\text{mA}$ )        | nm            |      | 645  |       |
| Special Line Half-Width, $\Delta\lambda$ ( $I_F=20\text{mA}$ )     | nm            |      | 20   |       |
| Forward Voltage per Seg., $V_F$ ( $I_F=20\text{mA}$ )              | V             | 1.60 | 1.80 | 2.2   |
| Reverse Current per chipSeg., $I_R$ , ( $V_R=5\text{V}$ )          | $\mu\text{A}$ |      |      | 100   |
| Luminous Intensity Matching Ratio, $I_{V-m}$ ( $I_F=20\text{mA}$ ) |               |      |      | 2 : 1 |