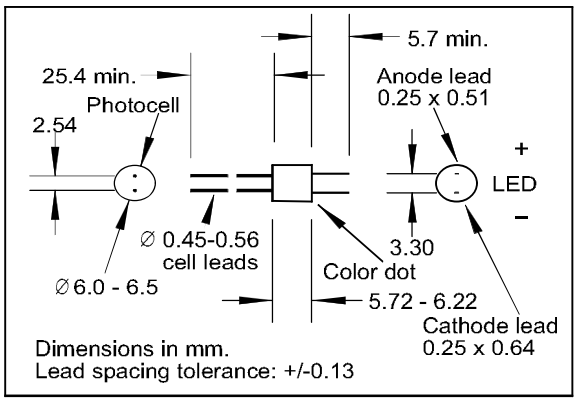
# NSL-32SR2S (Sorted)

## Optocoupler

### Features

- Compact, moisture resistant package
- Lowest “on” resistance
- Very low LED current
- Passive resistance output
- Low distortion
- Ideal for applications requiring matched devices



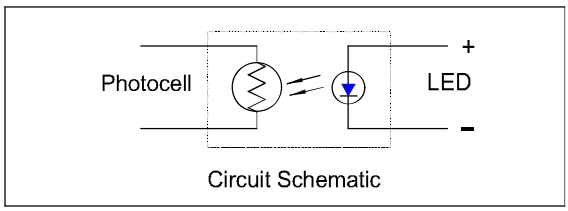

### Description

This optocoupler consists of an LED input optically coupled to a photocell. The photocell resistance is high when the LED current is “off” and low resistance when the LED current is “on”.

### Absolute Maximum Ratings

| | |
|---|---|
| Storage Temperature | -40 to +75°C |
| Operating Temperature | -40 to +75°C |
| Soldering Temperature (1) | 260°C |
| Isolation Voltage (peak) | 2000V |

Note: (1) >2 mm from case for <5 sec.
(2) Derate linearly to 0 at 75°C
(3) Packaged in ranges. Printed with part number, R2 followed by a letter. Individual ranges not available separately. Range distribution is not guaranteed.




### Electrical Characteristics ($T_A$=25°C unless otherwise noted)

| Symbol | Parameter | Min. | Typ. | Max. | Units | Test Conditions |
|---|---|---|---|---|---|---|
| LED | | | | | | |
| $I_F$ | Forward Current | | | 25 | mA | |
| $V_F$ | Forward Voltage | | | 2.5 | V | $I_F$ = 20 mA |
| $I_R$ | Reverse Current | | | 10 | µA | $V_R$ = 4V |
| Cell | | | | | | |
| $V_C$ | Maximum Cell Voltage | | | 60 | V | (Peak AC or DC) |
| $P_D$ | Power Dissipation | | | 50 | mW | (2) |
| Coupled | | | | | | |
| $R_{ON}$ | On Resistance | | 40 | | Ω | $I_F$ = 20 mA |
| Range(3) | R2A | 100 | | 110 | | $I_F$ = 1 mA (guaranteed +/- 1 range) |
| | R2B | 110 | | 122 | | |
| | R2C | 122 | | 135 | | |
| | R2D | 135 | | 149 | | |
| | R2E | 149 | | 164 | | |
| | R2F | 164 | | 181 | | |
| | R2G | 181 | | 200 | | |
| $R_{OFF}$ | Off Resistance | 1 | 5 | | MΩ | 10 sec after $I_F$ = 0, 5Vdc on cell. |
| $T_R$ | Rise Time | | 5 | | msec | Time to 63% of final conductance @ $I_F$ = 20mA |
| $T_F$ | Decay Time | | 80 | | msec | Time to 100KΩ after removal of $I_F$ = 20mA |
| | Cell Temp Coefficient | | 0.7 | | %/°C | $I_F$ > 5 mA |

Specifications subject to change without notice 104539 REV 0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