

**Absolute Maximum Ratings (@ 25° C)**

| Parameter                                            | Min  | Typ | Max              | Units            |
|------------------------------------------------------|------|-----|------------------|------------------|
| Input Power Dissipation                              | -    | -   | 150 <sup>1</sup> | mW               |
| Input Control Current                                | -    | -   | 100              | mA               |
| Peak (10ms)                                          | -    | -   | 1                | A                |
| Total Package Dissipation                            | -    | -   | 500 <sup>2</sup> | mW               |
| Isolation Voltage<br>Input to Output<br>SOIC Package | 3750 | -   | -                | V <sub>RMS</sub> |
| Operational Temperature                              | -40  |     | +85              | °C               |
| Storage Temperature                                  | -40  | -   | +125             | °C               |
| Soldering Temperature<br>(10 Seconds Max)            | -    | -   | +260             | °C               |
| Flatpack Package                                     | -    | -   | +220             | °C               |

<sup>1</sup> Derate Linearly 1.33 mW/°C<sup>2</sup> Derate Linearly 6.67 mW/°C

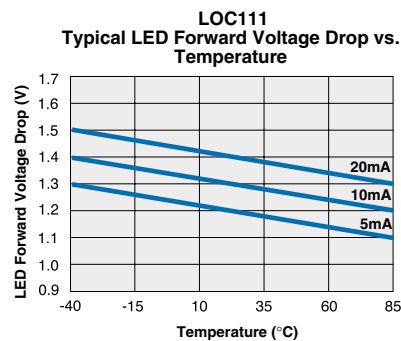
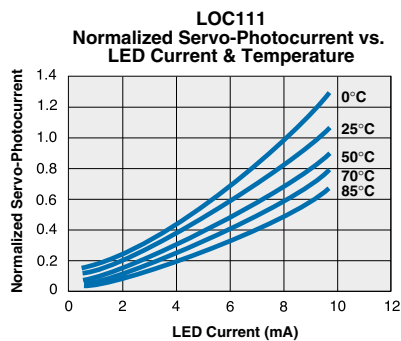
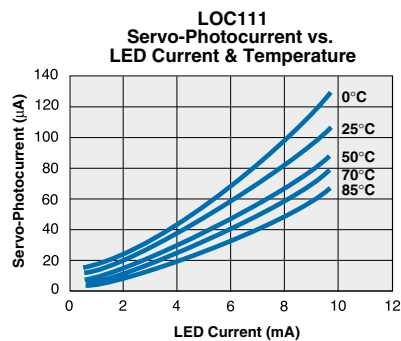
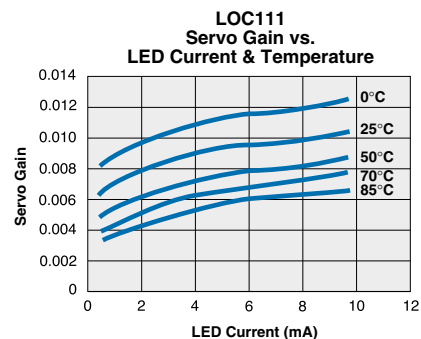
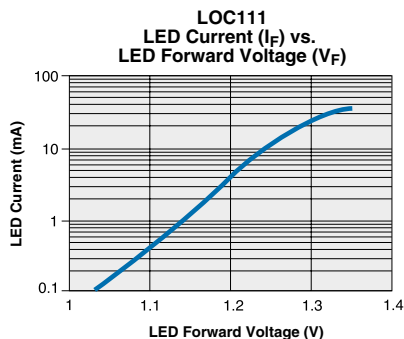
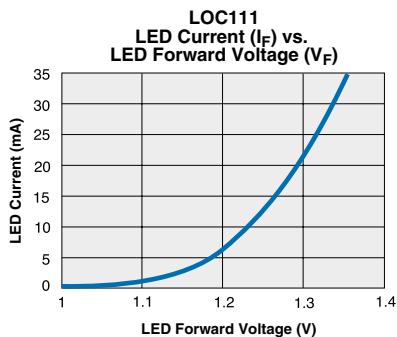
*Absolute Maximum Ratings are stress ratings. Stresses in excess of these ratings can cause permanent damage to the device. Functional operation of the device at these or any other conditions beyond those indicated in the operational sections of this data sheet is not implied. Exposure of the device to the absolute maximum ratings for an extended period may degrade the device and effect its reliability.*

**Electrical Characteristics**

| Parameter                                                        | Conditions                                             | Symbol           | Min   | Typ   | Max   | Units            |
|------------------------------------------------------------------|--------------------------------------------------------|------------------|-------|-------|-------|------------------|
| <b>Input Characteristics @ 25°C</b>                              |                                                        |                  |       |       |       |                  |
| LED Voltage Drop                                                 | I <sub>F</sub> =2-10mA                                 | V <sub>F</sub>   | 0.9   | 1.2   | 1.4   | V                |
| Reverse LED Current                                              | V <sub>R</sub> =5V                                     | I <sub>R</sub>   | -     | -     | 10    | μA               |
| Reverse LED Voltage                                              | -                                                      | V <sub>R</sub>   | -     | -     | 5     | V                |
| Forward LED Current                                              | -                                                      | I <sub>F</sub>   | -     | -     | 100   | mA               |
| <b>Coupler/Detector Characteristics @ 25°C</b>                   |                                                        |                  |       |       |       |                  |
| Dark Current                                                     | I <sub>F</sub> =0mA, V <sub>CC</sub> =15V              | I <sub>D</sub>   | -     | 1     | 25    | nA               |
| K1, Servo Gain (I <sub>1</sub> /I <sub>F</sub> )                 | I <sub>F</sub> =2-10mA, V <sub>CC</sub> =15V           | K1               | 0.008 | -     | 0.030 | -                |
| K2, Forward Gain (I <sub>2</sub> /I <sub>F</sub> )               | I <sub>F</sub> =2-10mA, V <sub>CC</sub> =15V           | K2               | 0.006 | -     | 0.030 | -                |
| K3, Transfer Gain (K <sub>2</sub> /K <sub>1</sub> ) <sup>1</sup> | I <sub>F</sub> =2-10mA, V <sub>CC</sub> =15V           | K3               | 0.733 | 1.0   | 1.072 | -                |
| ΔK3, Transfer Gain Linearity <sup>1</sup><br>(non-servoed)       | I <sub>F</sub> =2-10mA                                 | ΔK3              | -     | -     | 1.0   | %                |
| K3 Temperature Coefficient                                       | I <sub>F</sub> =2-10mA, V <sub>det</sub> =-5V          | ΔK3/ΔT           | -     | 0.005 | -     | %/°C             |
| Common Mode<br>Rejection Ratio                                   | V=20V <sub>p-p</sub> , R <sub>L</sub> =2KΩ,<br>F=100Hz | CMRR             | -     | 130   | -     | dB               |
| Total Harmonic Distortion                                        | F <sub>0</sub> =350Hz, 0dBm                            | THD              | -96   | -87   | -80   | dB               |
| Frequency Response                                               | Photoconductive Operation                              | BW (-3dB)        | -     | 200   | -     | kHz              |
|                                                                  | Photovoltaic Operation                                 | BW (-3dB)        | -     | 40    | -     | kHz              |
| Input/Output Capacitance                                         | -                                                      | C <sub>I/O</sub> | -     | 3     | -     | pF               |
| Input/Output Isolation                                           | -                                                      | V <sub>I/O</sub> | 3750  | -     | -     | V <sub>RMS</sub> |

<sup>1</sup> LOC111 and LOC112 Bins D,E,F,G.

PERFORMANCE DATA\*

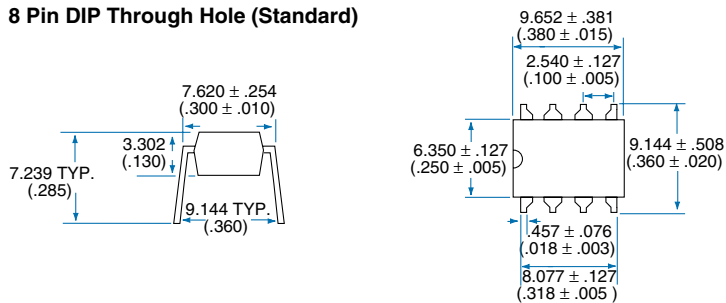
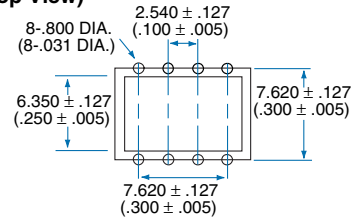


\* The Performance data shown in the graphs above is typical of device performance. For guaranteed parameters not indicated in the written specifications, please contact our application department.

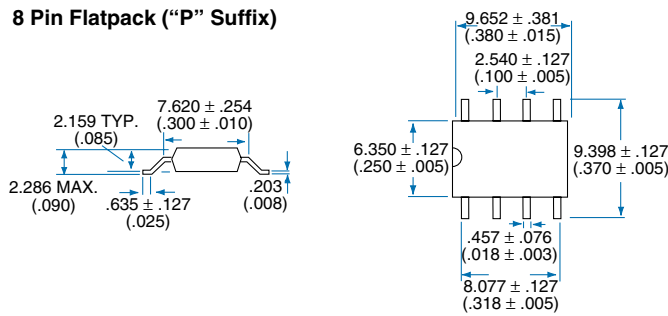
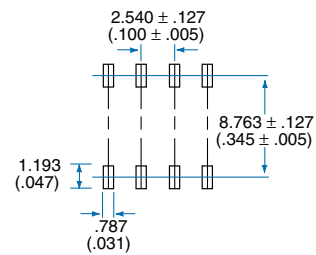


## MECHANICAL DIMENSIONS

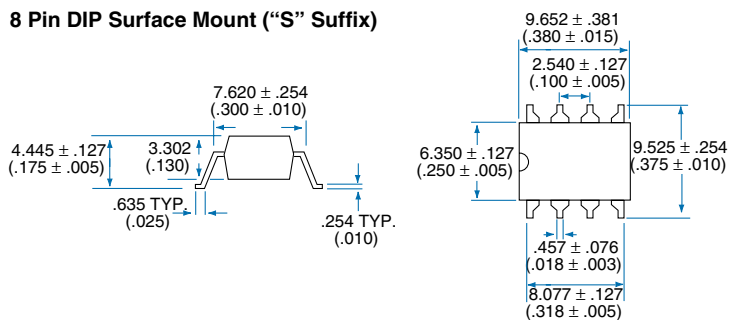
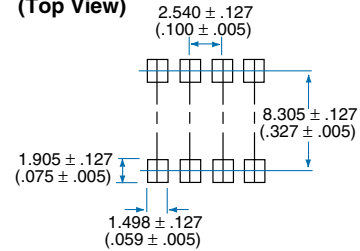
## 8 Pin DIP Through Hole (Standard)

PC Board Pattern  
(Top View)

## 8 Pin Flatpack ("P" Suffix)

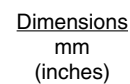
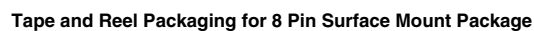
PC Board Pattern  
(Top View)

## 8 Pin DIP Surface Mount ("S" Suffix)

PC Board Pattern  
(Top View)

Dimensions  
mm  
(inches)

### Tape and Reel Packaging for 8 Pin Flatpack Package





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