Product Brief

CDM10V
0-10 V dimming interface IC

The compact and highly integrated CDM10V allows designers to replace many of the discrete components used in conventional 0-10 V dimming schemes with a single device.

Analog 0-10 V to digital PWM converter for dimming
Infineon’s CDM10V is the industry’s first single-chip lighting interface IC dedicated for lighting applications capable of transforming an analog 0-10 V input into a PWM or dimming input signal required by a lighting controller IC. The signal is delivered in the form of a 5 mA optocoupler-ready 0 to 100 percent PWM output. One-time configuration of key parameters such as minimum duty cycle (1 to 10 percent), PWM output frequency (200 Hz to 2 kHz), dimmer/resistor bias current (50 µA to 500 µA) and “dim-to-off” functionality allows the CDM10V to be used across a variety of different commercial and industrial LED lighting applications. Furthermore, with “dim-to-off” enabled the IC also provides the option of accepting PWM input signals.

Key features
- Small SOT-23 package
- Active dimming (0-10 V)
- Passive dimming (resistor)
- PWM input
- Supply voltage 11-25 V
- Configurable PWM frequency 200-2000 Hz
- Configurable minimum duty cycle 1-10 percent
- Configurable R-DIM bias current 50-500 µA
- Configurable dim-to-off
- Embedded digital signal processing maintains minimum variations from device to device

Key benefits
- Single device solution
- One solution for various applications with one time configuration possibility
- Transparent PWM mode to transfer PWM signals from secondary to primary side

Applications
- 0-10 V dimming
- Isolated signal transfer

www.infineon.com/cdm10v
**Typical application schematic using CDM10V**

**Product portfolio**

<table>
<thead>
<tr>
<th>Product</th>
<th>IOUT [mA]</th>
<th>Min. duty cycle [%]</th>
<th>PWM output frequency [kHz]</th>
<th>Dimmer/Resistor Bias Current [µA]</th>
<th>Dim-to-off</th>
<th>OPN</th>
<th>SP Number</th>
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<tbody>
<tr>
<td>CDM10V</td>
<td>5</td>
<td>1/2/5/10</td>
<td>0.2/0.5/1.0/2.0</td>
<td>50/100/200/500</td>
<td>Disabled/Enabled</td>
<td>CDM10VXTSA1</td>
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**CDM10V configuration board**

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<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Ordering code</th>
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<tr>
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<td>This is a configuration board for the one time configuration of the CDM10V</td>
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