The AL8116 is a versatile dimming input controller for offline LED lamps. It works with three types of dimmer signal formats:

1. 0 to 10V dimming voltage
2. PWM (Pulse Width Modulation) signal
3. Simple potentiometer

It converts these to a PWM output signal which can easily be used to provide an isolated dimming control via an optocoupler to the primary side LED driver.

The AL8116 has a wide supply voltage range from 10V to 56V. The AL8116 Output Duty Cycle accuracy is typically ±2.5% and its minimum Output Duty cycle can be set through a CLAMP pin resistor.

The AL8116 has an internal overtemperature protection (OTP) and it is available in the SOT26 package.

The Diodes Advantage

The AL8116 provides a high-performance solution for LED lamps with isolated dimming control.

- **Wide 10V–56V Supply Voltage Range**
  Operates from auxiliary winding output voltage or standard power rails

- **Supports PWM, 0-10V, and Potentiometer Dimming Input**
  Converted into 5V PWM Output Through Opto-Coupler
  Provides a simple cross-isolation barrier dimming solution

- **Accurate ±2.5% PWM Output Duty Cycle**
  Provides an accurate dimming curve

- **Adjustable Minimum PWM Output Duty Cycle**
  Set flexibility for the minimum brightness level

- **Built-in Overtemperature-Protection with Auto-Recovery**
  Protects the system from overheating

Applications

- 0-10V Dimming Luminaires
- Isolated Power Supplies for dimmable LED Lighting
- Smart LED Lighting
- Dimming Control Devices
- Commercial LED Lighting
- Dimmable LED Lighting
- Adjustable Control for Isolated Power Supplies
Diodes Off-line LED Drivers

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Min. Input Voltage</th>
<th>Max. Input Voltage</th>
<th>Dimming Accuracy</th>
<th>Supply Current</th>
<th>Dimming input</th>
<th>Minimum Output Duty Cycle</th>
<th>Dimming input</th>
<th>Operating Temp. Range</th>
<th>Package Outline</th>
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</thead>
<tbody>
<tr>
<td>AL8116W6-7</td>
<td>10</td>
<td>56</td>
<td>±2.5</td>
<td>0.6</td>
<td>Adjustable down to &lt;1%</td>
<td>0-10V</td>
<td>Y</td>
<td>Y</td>
<td>-40 ~ +105</td>
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Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package Code</th>
<th>Package</th>
<th>Tape and Reel</th>
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</thead>
<tbody>
<tr>
<td>AL8116W6-7</td>
<td>W6</td>
<td>SOT26</td>
<td>3000/Tape &amp; Reel</td>
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</tbody>
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To find out more information: https://www.diodes.com/part/AL8116