



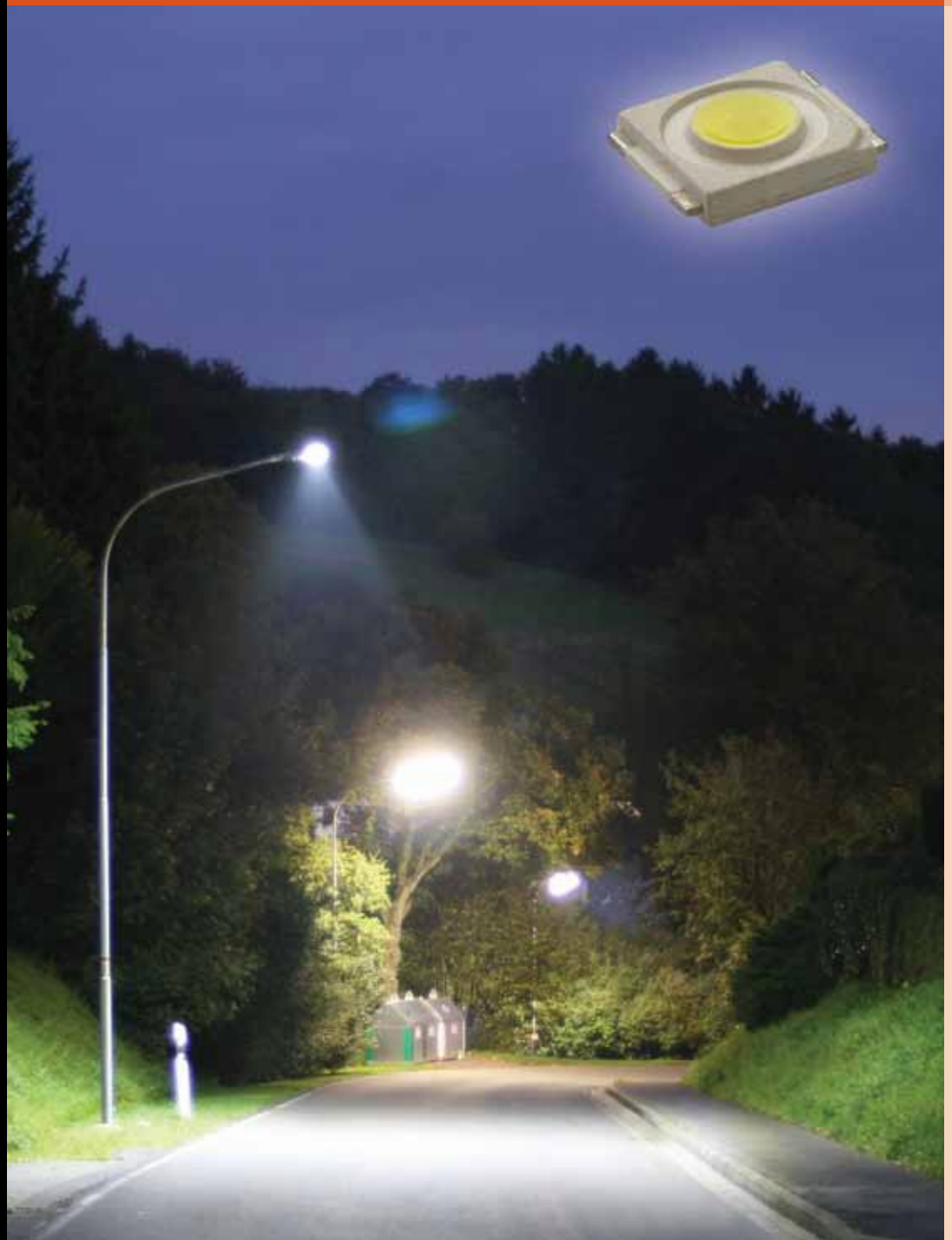
VISHAY INTERTECHNOLOGY, INC.

# LED LIGHTING DEVELOPMENT KIT

VL30-LDK / VL31-LDK

OPTOELECTRONICS

PRODUCT OVERVIEW





# LED LIGHTING DEVELOPMENT KIT

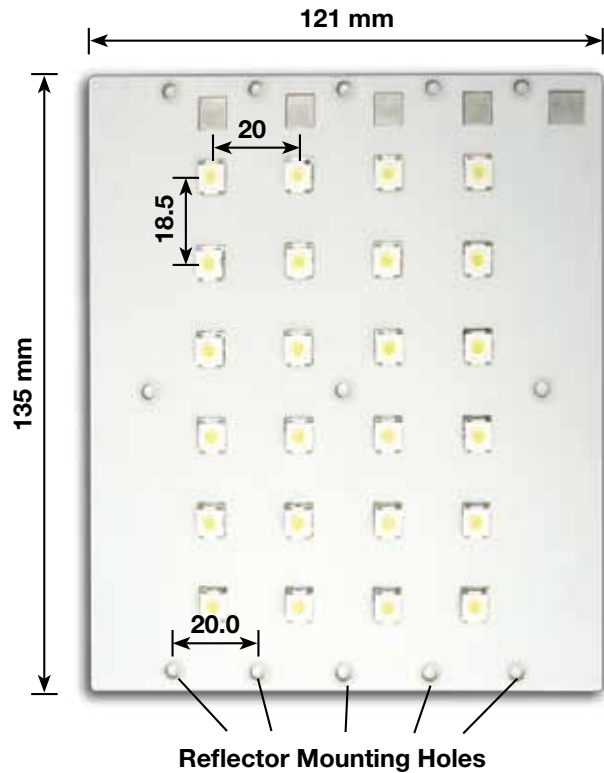
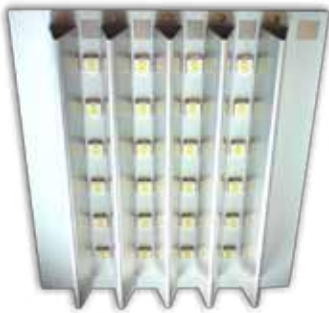
Vishay Semiconductors

## Introduction

Vishay's LED Lighting Development Kit is designed to give you everything you need to get up to speed designing with our solid-state lighting solutions. The kit includes an **LED lighting panel**, **reflectors**, and a **driver module**. It provides the basic tools to help you avoid development delays and focus on getting your product to market quickly, while adopting energy-efficient, environmentally friendly, long-lifetime LED lighting technology.

## Lighting Panel: VL30 and VL31

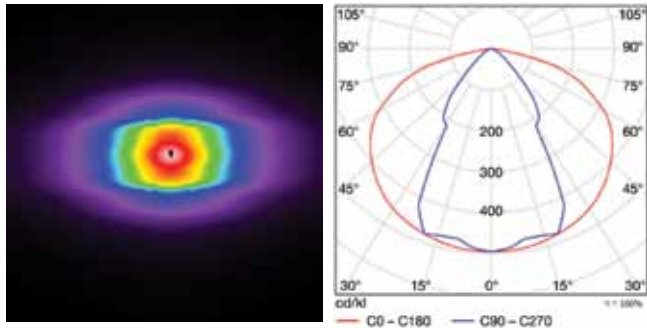
The fully populated LED lighting panel included in each kit consists of 4 strings of 6 LEDs mounted on a single-sided, single-layer, copper-based PCB. A shiny white surface provides a small degree of reflectivity of incident light. The copper surface helps conduct heat away from the LEDs. Two lighting panels are available. The cool white panel features Vishay's VLMW711U2U3XV high bright white LEDs with color temperatures from 5000 K to 7000 K and has luminous flux of 2160 lumens. The neutral white panel features Vishay's VLMW711T3U2US LEDs with color temperatures from 3800 K to 5000 K and has luminous flux of 1900 lumens.



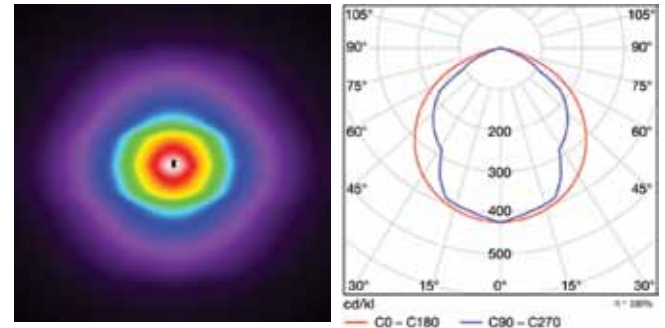
## Reflectors: VL31-REFL01

Aluminum alloy reflectors are provided to enable you to control the viewing angles and the pattern of illumination. As shown below, without reflectors the viewing angle is 120°. This viewing angle can be tightened to 55° with the use of the reflectors. Five reflectors are provided with each kit.

With reflectors, pattern is 55° x 120° oval



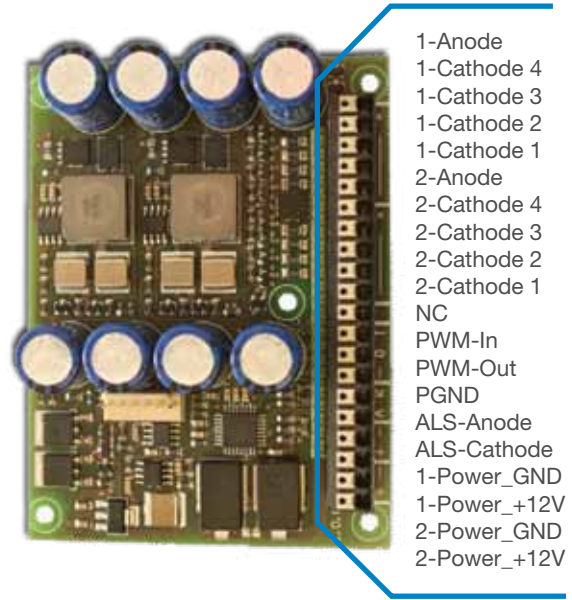
Without reflectors, pattern is ~120° cone



## Driver: VLSSL3-DU

The LED Driver board provides power to one or two panels. It provides a constant current source to up to 8 strings of 6 LEDs. A 12-V DC source is required to power the driver. The board features undervoltage and overvoltage protection. The driver's operating temperature is from - 40 °C to + 105 °C. Every component on the board is AEC-Q101 qualified and, where possible, sourced from Vishay. Each kit comes with one driver module.

- DC input supply voltage: 12 V, typical (11 V to 16 V)
- Input current: 2 A, typical
- Output current, constant: 1.4 A (4 strings at 350 mA)
- Output voltage ( $f \sum V_{f-string}$ ): 19.5 V, typical (18 V to 24 V)
- Maximum operating temperature: - 40 °C to + 105 °C
- Current source outputs ESD protected: > 30 kV, IEC 61000-4-2
- Standby current: 20 mA maximum at 25 °C
- RS232 digital interface
- Ambient light sensor input
  - Driver will adjust the pulse width modulation to one of four settings: 100 %, 75 %, 50 %, or 25 %



## Kit Ordering Information

Panel Part Number	Cool White VLSSL30	Natural White VLSSL31	Number of Panels	Number of Reflectors VLSSL-REFL01	Number of Drivers VLSSL3-DU
<a href="#">VLSSL30-LDK</a>	√		1	5	1
<a href="#">VLSSL31-LDK</a>		√			



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