

1 to 6 output LED Backlighting DC-DC Converter

Features

- ◆ One to Six Strings in One Package
- ◆ 12VDC Input
- ◆ Analog, Resistive, or PWM Dimming
- ◆ Small Size
- ◆ Through Hole or Surface Mount
- ◆ Off the shelf solution



Key Market Segments & Applications



Specifications

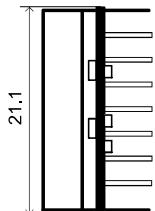
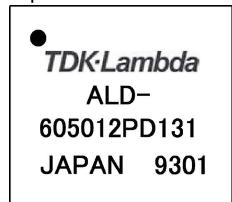
Model	Through Hole Version: ALD-605012PD131		Surface Mount Version: ALD-605012PS131	
Number of LED Strings	-	1, 2, 3 or 6 (user parallelable)		
DC Input	VDC	10.8 - 13.2VDC		
Input Curr. Max. (normal/inhibited)	A	1.4 / 0.001		
Output Current (each string)	mA	50mA (300mA if all 6 strings are paralleled)		
PWM Dimming Frequency	Hz	230Hz		
PWM Dimming	V	0 to 3.3V		
Analog Dimming (Dark-Light) Vbr	VDC	1.6V to 3.8V		
Analog Dimming (Dark-Light) Rbr	kΩ	1 to 10kΩ		
Remote On/Off (Vrmt)	VDC	OFF: 0V - 0.4V or floating, ON: 2.5V - Vin		
Output Voltage	VDC	38V Maximum, +Vin + 2V Minimum		
Oversupply Alarm	-	5V if any one string is open		
Operating Temperature	°C	-30 to +80°C (See page 2 for derating curves)		
Storage Temperature	°C	-40 to +85°C		
Max. Humidity (non condensing)	%RH	95%RH (Storage or Operating)		
Cooling	-	Convection		
Input to Output Isolation	-	None		
Vibration	-	588m/s ² (60G) 11ms Half-sine wave once each axis X,Y,Z,-X,-Y,-Z total 6 times		
Shock	-	5~10Hz Amplitude 10mm 10~200Hz Accelerated Velocity 21.6m/s ² (2.2G)		
Weight (Typ)	g	5.5g		
Size (LxWxH)	mm	22.86 x 21.1 x 8.5mm (8.8mm SMT version)		
Warranty	yr	One Year		

Note: See Installation Manual for full details, test methods of parameters and application notes

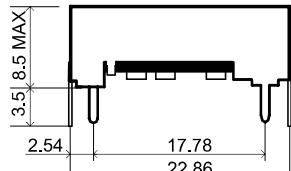
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Outline Drawing (Through Hole Version)

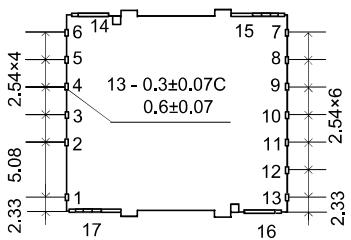
Top View



Side View

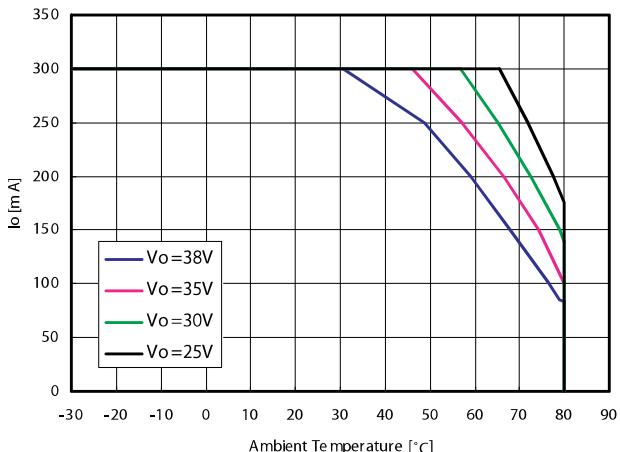


Bottom View



Derating Curves

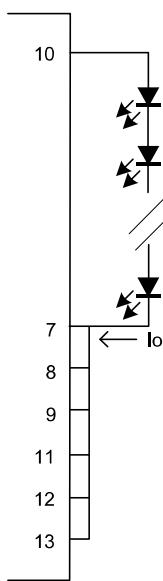
The following is derating curve of output current on our evaluation board.
Io=Total Io current of CH1 ~ 6.



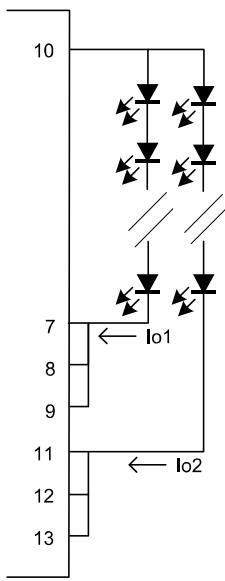
*Attention : In the case of parallel connection, temperature rise of IC(point 'B') is higher if each string has varied voltage (total of forward voltage).

Typical Applications

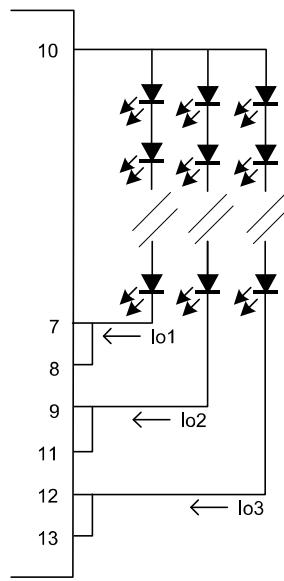
- One serial connection
Vo : 38V max
Io : 300 mA max



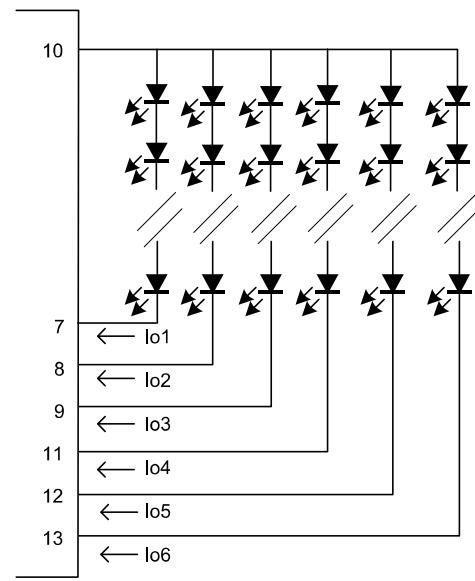
- Two serial connections
Vo : 38V max
Io1, 2 : 150 mA max



- Three serial connections
Vo : 38V max
Io1, 2, 3 : 100 mA max



- Six serial connections
Vo : 38V max
Io 1, 2, 3, 4, 5, 6 : 50 mA max



For Additional Information, please visit
us.tdk-lambda.com/lp/products/ald6-series.htm



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