# TDK·Lambda

# ALD Series

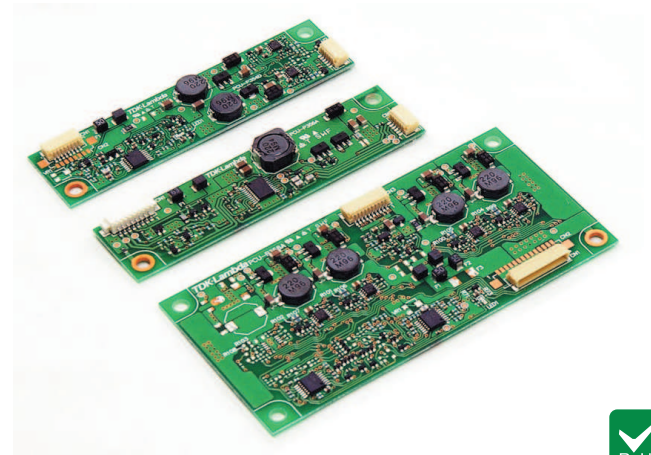## LED Backlighting DC-DC Converters

### Features

◆ Two to Five Strings
◆ 12VDC Input
◆ Analog or Resistive Dimming
◆ Low Profile
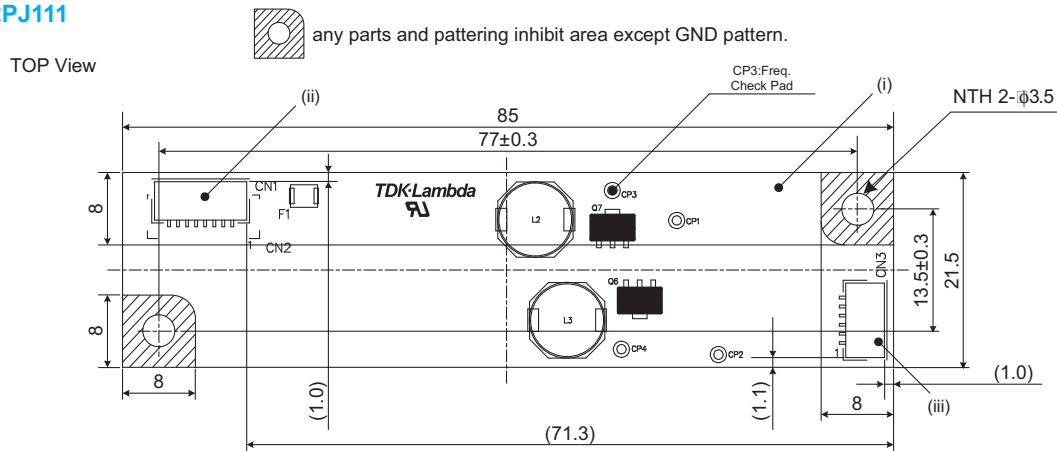◆ Off the shelf solution

### Key Market Segments & Applications

Industrial  Test  COMM  LED  Railroad  Broadcast

RoHS

## Specifications

| Model | | ALD-214012PJ111 | ALD-310012PJ125 | ALD-414012PJ126 | ALD-514012PJ134 |
|---|---|---|---|---|---|
| Number of LED Strings | - | 2 | 3 | 4 | 5 |
| DC Input | VDC | 10.8 - 13.2VDC | | | |
| Input Current Max.(norm./inhib.) | A | 1.2 / 0.001A | 1.5 / 0.001A | 2.0 / 0.001A | 2.5 / 0.001A |
| Output Current (each string) | mA | 140mA | 100mA | 140mA | 140mA |
| Dimming Frequency | Hz | 200Hz | 225Hz | 200Hz | 200Hz |
| Analog Dim. (Dark to Light) Vbr | VDC | 2.5V to 0V | 0V to 4V (Vbr2) | 2.5V to 0V | 2.5V to 0V |
| Analog Dim. (Dark to Light) Rbr | kΩ | 50 - 0kΩ | 0 - 10kΩ | 50 - 0kΩ | 50 - 0kΩ |
| PWM Dimming | VDC | 2.5V to 0V | 0 to 2.5V | 2.5V to 0V | 2.5V to 0V |
| Remote On/Off (Vrmt) | VDC | OFF: 0V - 0.4V, ON: 2.5V - Vin | | | |
| Maximum Output Voltage | VDC | 44V | 38V | 44V | 44V |
| Overvoltage Alarm | VDC | Approximately 5V if any one string is open | | | |
| Operating Temperature | °C | -30 to +85°C | | | |
| Storage Temperature | °C | -40 to +85°C | | | |
| Maximum Humidity (1) | %RH | 95%RH (Storage or Operating) | | | |
| Cooling | - | Convection | | | |
| Input to Output Isolation | - | None | | | |
| Vibration | - | 588m/s² (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/s²(2.2G) | | | |
| Weight (Typ) | g | 9g | 9g | 22g | 22g |
| Size (LxWxH) | mm | 85 x 21.5 x 5mm | 85 x 21.5 x 5.5mm | 100 x 50 x 5.2mm | 100 x 50 x 5.2mm |
| Warranty | Yr | One Year | | | |

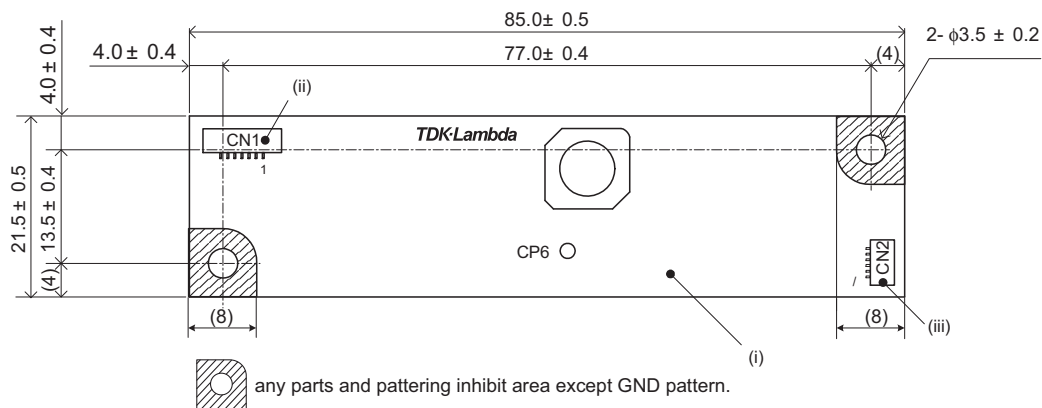Note: See Installation Manual for full details, test methods of parameters and application notes
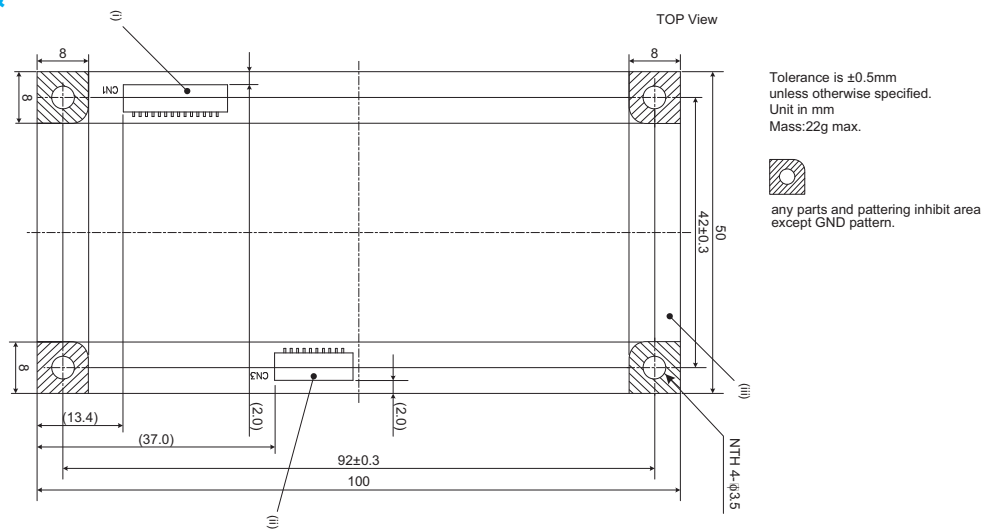
(1) non condensing

## Outline Drawing

### ALD-214012PJ111

any parts and pattering inhibit area except GND pattern.

TOP View

CP3:Freq. Check Pad

(i)

NTH 2-φ3.5

85
77±0.3
8
CN1
F1
CN2
TDK·Lambda
L2
Q7
CP3
CP1
Q6
L3
CP4
CP2
CN3
13.5±0.3
21.5
8
8
(1.0)
(1.1)
8
(1.0)
(iii)
(71.3)
(ii)

### ALD-310012PJ125

85.0± 0.5
77.0± 0.4
4.0 ± 0.4
(4)
2- φ3.5 ± 0.2
(ii)
CN1
1
TDK·Lambda
CP6
CN2
21.5 ± 0.5
13.5 ± 0.4
(4)
(8)
(8)
(iii)
(i)

any parts and pattering inhibit area except GND pattern.

### ALD-414012PJ126 & ALD-514012PJ134

TOP View

(i)
8
8
CN1
8
CN3
50
42±0.3
(13.4)
(2.0)
(2.0)
(37.0)
92±0.3
100
(i)
(ii)
NTH 4-φ3.5

Tolerance is ±0.5mm
unless otherwise specified.
Unit in mm
Mass:22g max.

any parts and pattering inhibit area
except GND pattern.

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

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