

■ Features :

- DC/DC step-down converter
- Constant current output: 300mA to 700mA
- Wide input voltage: 9 ~ 36VDC
- Wide output LED string voltage: 2 ~ 32VDC
- High efficiency up to 95%
- Built-in EMI filter, comply with BS EN/EN55015 and FCC part15 without additional input filter and capacitors
- Built-in PWM dimming and remote ON/OFF control
- Protections: Short circuit / Over temperature
- Cooling by free air convection
- Fully encapsulated with IP67 level for pin and wire style
- Compact size
- Low cost, high reliability
- Suitable for driving illumination LED
- 3 years warranty

■ GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>



LDD-350L  Blank : pin style  
W : wire style  
S : SMD style

SPECIFICATION

| ORDER NO.                        | LDD-300L <input type="checkbox"/>  | LDD-350L <input type="checkbox"/>  | LDD-500L <input type="checkbox"/> | LDD-600L <input type="checkbox"/> | LDD-700L <input type="checkbox"/> |          |       |
|----------------------------------|--|--|-----------------------------------|-----------------------------------|-----------------------------------|----------|-------|
| OUTPUT                           | CURRENT RANGE  | 300mA  | 350mA                             | 500mA                             | 600mA                             | 700mA    |       |
|                                  | VOLTAGE RANGE <small>Note.4</small>  | 2 ~ 32VDC for LDD-300~700L/LW ; 2~ 28VDC for LDD-300~700LS   |                                   |                                   |                                   |          |       |
|                                  | CURRENT ACCURACY (Typ.)  | ±5% at 24VDC input   |                                   |                                   |                                   |          |       |
|                                  | RIPPLE & NOISE(max.) <small>Note.2</small>   | 150mVp-p   | 150mVp-p                          | 150mVp-p                          | 200mVp-p                          | 200mVp-p |       |
|                                  | SWITCHING FREQUENCY  | 40KHz ~ 1000KHz  |                                   |                                   |                                   |          |       |
| EXTERNAL CAPACITANCE LOAD (max.) | 2.2uF  |  |                                   |                                   |                                   |          |       |
| INPUT                            | VOLTAGE RANGE  | 9 ~ 36VDC for LDD-300~700L/LW ; 9~ 32VDC for LDD-300~700LS   |                                   |                                   |                                   |          |       |
|                                  | EFFICIENCY (max.)  | 95% at full load and 24VDC/36VDC input for LDD-300~700L/LW ; 95% at full load and 24VDC input for LDD-300~700LS                            |                                   |                                   |                                   |          |       |
|                                  | DC CURRENT   | Full load <small>Note.3</small>  | 300mA                             | 350mA                             | 500mA                             | 600mA    | 700mA |
|                                  |  | No load  | 5mA                               |                                   |                                   |          |       |
| FILTER                           | Capacitor  |  |                                   |                                   |                                   |          |       |
| PWM DIMMING & ON/OFF CONTROL     | REMOTE ON/OFF  | Leave open if not use<br>Power ON with dimming: DIM ~ -Vin >3.5 ~ 8VDC or open circuit<br>Power OFF : DIM ~ -Vin < 0.5VDC or short         |                                   |                                   |                                   |          |       |
|                                  | PWM FREQUENCY  | 100 ~ 1KHz   |                                   |                                   |                                   |          |       |
|                                  | QUIESCENT INPUT CURRENT IN SHUTDOWN MODE(max.)   | 1mA at PWM dimming OFF and 24VDC input   |                                   |                                   |                                   |          |       |
| PROTECTION                       | SHORT CIRCUIT  | Regulated at rated output current<br>Protection type: Can be continued, recovers automatically after fault condition is removed            |                                   |                                   |                                   |          |       |
|                                  | OVER TEMPERATURE   | Tj 150°C typically(IC1) detect on main control IC<br>Protection type : Shut down, recovers automatically after temperature goes down       |                                   |                                   |                                   |          |       |
| ENVIRONMENT                      | WORKING TEMP.  | -40 ~ + 85°C (Refer to derating curve)   |                                   |                                   |                                   |          |       |
|                                  | WORKING HUMIDITY   | 20% ~ 90% RH non-condensing for LDD-300~700L/LW ; 20% ~ 85% RH non-condensing for LDD-300~700LS  |                                   |                                   |                                   |          |       |
|                                  | STORAGE TEMP., HUMIDITY  | -55 ~ +125°C, 10 ~ 95% RH  |                                   |                                   |                                   |          |       |
|                                  | TEMP. COEFFICIENT  | ±0.03% / °C  |                                   |                                   |                                   |          |       |
|                                  | VIBRATION  | 10 ~ 500Hz, 2G 10min./1 cycle, period for 60min. each along X, Y, Z axes   |                                   |                                   |                                   |          |       |
|                                  | OPERATING CASE TEMP. (max.)  | 100°C  |                                   |                                   |                                   |          |       |
| EMC                              | SAFETY STANDARDS   | EAC TP TC 020/2011 approved  |                                   |                                   |                                   |          |       |
|                                  | EMC EMISSION   | Compliance to BS EN/EN55015, FCC part 15 class B, EAC TP TC 020  |                                   |                                   |                                   |          |       |
|                                  | EMC IMMUNITY   | Compliance to BS EN/EN61000-4-2,3,4,6,8, light industry level, criteria A, EAC TP TC 020   |                                   |                                   |                                   |          |       |
| OTHERS                           | MTBF   | 1000Khrs min. MIL-HDBK-217F (25°C)   |                                   |                                   |                                   |          |       |
|                                  | DIMENSION  | 22.6*9.9*8.9mm or 0.89**0.39**0.35" inch (L*W*H) for LDD-300~700L/LW ; 25.4*10.5*9.3mm or 1**0.4135**0.366" inch (L*W*H) for LDD-300~700LS |                                   |                                   |                                   |          |       |
|                                  | WEIGHT   | LDD-300~700L:4g ; LDD-300~700LW:7.3g ; LDD-300~700LS :3.4g   |                                   |                                   |                                   |          |       |
|                                  | POTTING MATERIAL   | Epoxy(UL94-V0) for LDD-300~700L/LW ; without potted for LDD-300~700LS  |                                   |                                   |                                   |          |       |
| NOTE                             | 1. All parameters are specified at normal input(24VDC), rated load, 25°C 70% RH ambient.<br>2. Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uf capacitor.<br>3. Test condition: 24VDC input.<br>4. Output voltage will always step down by 3 volts from input DC voltage.<br>5. The output of LDD-L should not be connected to the input of the same unit or output from other sources.<br>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a> |  |                                   |                                   |                                   |          |       |



■ Features :

- DC/DC step-down converter
- Constant current output: 1000mA to 1500mA
- Wide input voltage: 6 ~ 36VDC
- Wide output LED string voltage: 2 ~ 30VDC
- High efficiency up to 95%
- Built-in EMI filter, comply with BS EN/EN55015 and FCC part15 without additional input filter and capacitors
- Built-in PWM +analog dimming and remote ON/OFF control
- Protections: Short circuit
- Cooling by free air convection
- Fully encapsulated with IP67 level for pin and wire style
- Non-potted, optional conformal coating for SMD style (Order No.: LDD-1000LSC)
- Compact size
- Low cost, high reliability
- Suitable for driving illumination LED
- 3 years warranty



LDD-1000L  W Blank : pin style  
W : wire style  
S : SMD style

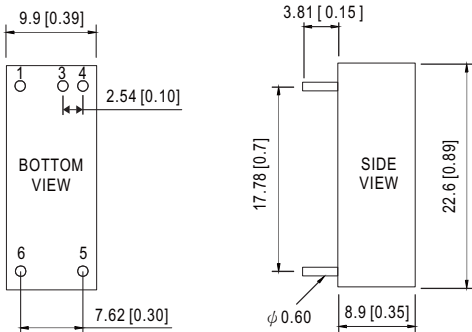
**SPECIFICATION**

| ORDER NO.                                      | LDD-1000L <input type="checkbox"/>   | LDD-1200L <input type="checkbox"/>  | LDD-1500L <input type="checkbox"/> |         |        |
|--|--|---|------------------------------------|---------|--------|
| OUTPUT   | CURRENT RANGE  | 1000mA  | 1200mA                             | 1500mA  |        |
|  | VOLTAGE RANGE <small>Note.4</small>  | 2 ~ 30VDC   |                                    |         |        |
|  | CURRENT ACCURACY (Typ.)  | ±5% at 24VDC input  |                                    |         |        |
|  | RIPPLE & NOISE(max.) <small>Note.2</small>   | 1.5Vp-p   | 1.5Vp-p                            | 1.5Vp-p |        |
|  | SWITCHING FREQUENCY  | 1000KHz   |                                    |         |        |
|  | EXTERNAL CAPACITANCE LOAD (max.)   | 2.2uF   |                                    |         |        |
| INPUT  | VOLTAGE RANGE  | 6 ~ 36VDC   |                                    |         |        |
|  | EFFICIENCY (max.)  | 95% at full load and 24VDC/36VDC input for LDD-1000~1500L/LW  |                                    |         |        |
|  | DC CURRENT   | Full load <small>Note.3</small>   | 990mA                              | 1160mA  | 1450mA |
|  |  | No load   | 5mA                                |         |        |
| FILTER   | Capacitor  |   |                                    |         |        |
| PWM DIMMING & ON/OFF CONTROL                   | REMOTE ON/OFF  | Leave open if not use   |                                    |         |        |
|  |  | Power ON with dimming: DIM ~ -Vin >2.6 ~ 5.5VDC or open circuit   |                                    |         |        |
|  |  | Power OFF : DIM ~ -Vin < 0.4VDC or short  |                                    |         |        |
| PWM FREQUENCY                                  | 100 ~ 500Hz  |   |                                    |         |        |
| QUIESCENT INPUT CURRENT IN SHUTDOWN MODE(max.) | 1mA at PWM dimming OFF and 24VDC input   |   |                                    |         |        |
| ANALOG DIMMING & ON/OFF CONTROL                | REMOTE ON / OFF  | Leave open if not use   |                                    |         |        |
|  |  | Power ON with dimming : DIM ~ -Vin>0.5~2.5VDC or open circuit   |                                    |         |        |
|  |  | Power OFF : DIM ~ -Vin<0.4VDC or short  |                                    |         |        |
| PROTECTION                                     | SHORT CIRCUIT  | Regulated at rated output current   |                                    |         |        |
|  |  | Protection type: Can be continued, recovers automatically after fault condition is removed  |                                    |         |        |
| ENVIRONMENT                                    | WORKING TEMP.  | -40 ~ + 71°C (Refer to derating curve)  |                                    |         |        |
|  | WORKING HUMIDITY   | 20% ~ 90% RH non-condensing for LDD-1000~1500L/LW ; 20%~85% RH non-condensing for LDD-1000~1500LS   |                                    |         |        |
|  | STORAGE TEMP., HUMIDITY  | -55 ~ +125°C, 10 ~ 95% RH   |                                    |         |        |
|  | TEMP. COEFFICIENT  | ±0.03% / °C   |                                    |         |        |
|  | VIBRATION  | 10 ~ 500Hz, 2G 10min./1 cycle, period for 60min. each along X, Y, Z axes  |                                    |         |        |
|  | OPERATING CASE TEMP. (max.)  | 100°C   |                                    |         |        |
| EMC  | SAFETY STANDARDS   | EAC TP TC 020/2011 approved   |                                    |         |        |
|  | EMC EMISSION   | Compliance to BS EN/EN55015, FCC part 15 class B, EAC TP TC 020   |                                    |         |        |
|  | EMC IMMUNITY   | Compliance to BS EN/EN61000-4-2,3,4,6,8, light industry level, criteria A, EAC TP TC 020  |                                    |         |        |
| OTHERS   | MTBF   | 1000Khrs min. MIL-HDBK-217F (25°C)  |                                    |         |        |
|  | DIMENSION  | 31.8*20.3*12.2mm or 1.25**0.8**0.48" inch (L*W*H) for LDD-1000~1500L/LW ; 31.8*20.3*10.9mm or 1.25**0.8**0.43" inch (L*W*H) for LDD-1000~1500LS |                                    |         |        |
|  | WEIGHT   | LDD-1000~1500L:15.6g ; LDD-1000~1500LW:18g ; LDD-1000~1500LS:12.8g  |                                    |         |        |
|  | POTTING MATERIAL   | Expoxy(UL94-V0) for LDD-1000~1500L/LW ; without potted for LDD-1000~1500LS  |                                    |         |        |
| NOTE   | <p>1.All parameters are specified at normal input(24VDC), rated load, 25°C 70% RH ambient.</p> <p>2.Ripple &amp; noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uf capacitor.</p> <p>3.Test condition: 36VDC input.</p> <p>4.Output voltage will always step down by 3 volts from input DC voltage.</p> <p>5.The output of LDD-L should not be connected to the input of the same unit or output from other sources.</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p> |   |                                    |         |        |

■ Mechanical Specification

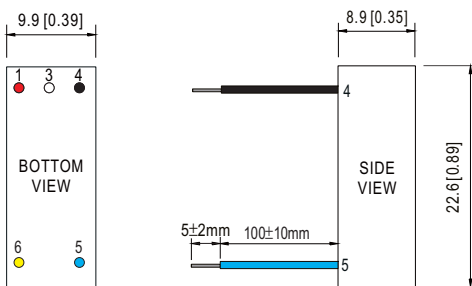
Blank type(LDD-300~700L):

Unit: mm (inch)



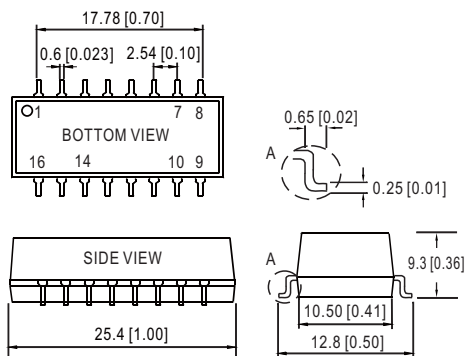
NOTE: Pin tolerance  $\pm 0.05\text{mm}$

W type(LDD-300~700LW):

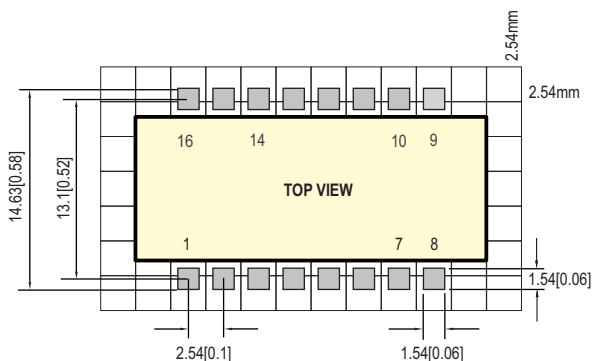


NOTE: All wires UL3385 22AWG

S type(LDD-300~700LS):



■ Recommended PCB layout (for LDD-300~700LS)



■ Pin Configuration

| Pin No. | Comment   |
|---------|---|
| 1       | +Vin<br>DC Supply   |
| 3       | PWM DIM<br>ON/OFF and PWM Dimming<br>(Leave open if not used) |
| 4       | -Vin<br>Don't connect to -Vout                                |
| 5       | -Vout<br>LED - Connection                                     |
| 6       | +Vout<br>LED + Connection                                     |

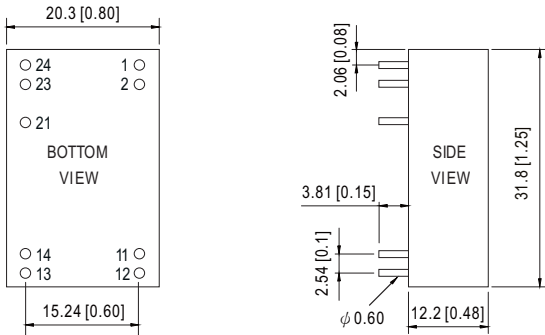
| Pin No. | Comment  |
|---------|--|
| 1       | +Vin<br>(Red)<br>DC Supply   |
| 3       | PWM DIM<br>(White)<br>ON/OFF and PWM Dimming<br>(Leave open if not used) |
| 4       | -Vin<br>(Black)<br>Don't connect to -Vout                                |
| 5       | -Vout<br>(Blue)<br>LED - Connection                                      |
| 6       | +Vout<br>(Yellow)<br>LED + Connection                                    |

| Pin No. | Comment   |
|---------|---|
| 1       | +Vin<br>DC Supply   |
| 7,8     | +Vout<br>LED + Connection                                     |
| 9,10    | -Vout<br>LED - Connection                                     |
| 14      | PWM DIM<br>ON/OFF and PWM Dimming<br>(Leave open if not used) |
| 16      | -Vin<br>Don't connect to -Vout                                |
| others  | N.C<br>LED - Connection                                       |

**Mechanical Specification**

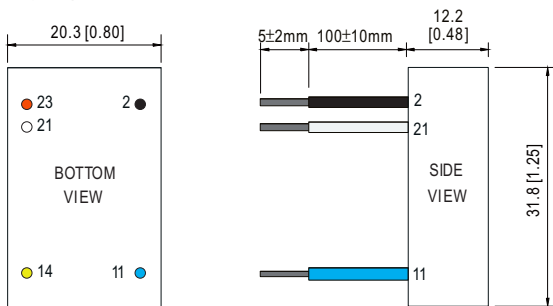
**Blank type(LDD – 1000~1500L):**

Unit: mm (inch)



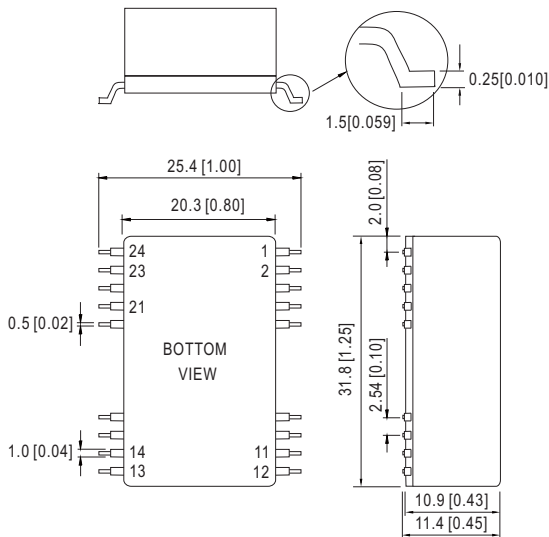
NOTE: Pin tolerance  $\pm 0.05$ mm

**W type(LDD – 1000~1500LW):**

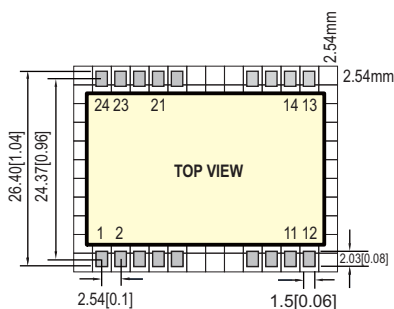


NOTE: All wires UL3385 22AWG

**S type(LDD – 1000~1500LS):**



**Recommended PCB layout (for LDD-1000~1500LS)**



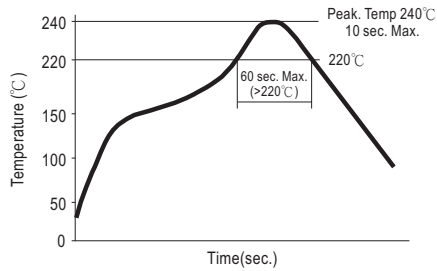
**Pin Configuration**

| Pin No. |                 | Comment  |
|---------|-----------------|--|
| 1,2     | -Vin            | Don't connect to -Vout                                   |
| 11,12   | -Vout           | LED - Connection   |
| 13,14   | +Vout           | LED + Connection   |
| 21      | PWM +analog DIM | ON/OFF and PWM / analog Dimming (Leave open if not used) |
| 23,24   | +Vin            | DC Supply  |

| Pin No. |                         | Comment  |
|---------|-------------------------|--|
| 2       | -Vin (Black)            | Don't connect to -Vout                                   |
| 11      | -Vout (Blue)            | LED - Connection   |
| 14      | +Vout (Yellow)          | LED + Connection   |
| 21      | PWM +analog DIM (White) | ON/OFF and PWM / analog Dimming (Leave open if not used) |
| 23      | +Vin (Red)              | DC Supply  |

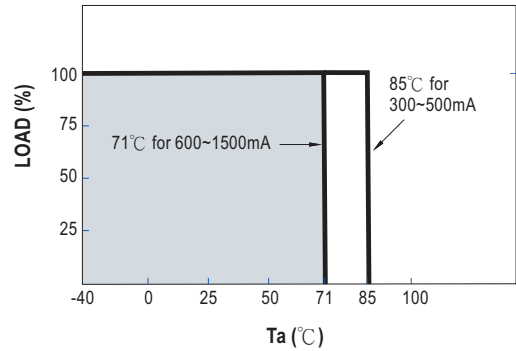
| Pin No. |                 | Comment  |
|---------|-----------------|--|
| 1,2     | -Vin            | Don't connect to -Vout                                   |
| 11,12   | -Vout           | LED - Connection   |
| 13,14   | +Vout           | LED + Connection   |
| 21      | PWM +analog DIM | ON/OFF and PWM / analog Dimming (Leave open if not used) |
| 23,24   | +Vin            | DC Supply  |
| others  | N.C             | No connection  |

■ Reflow Soldering Curve (for LDD-300~1500LS)



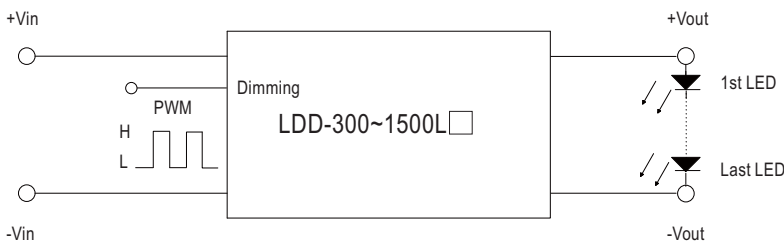
Remark : The curve applies only to the " Hot Air Reflow Soldering"

■ Derating Curve



■ PWM Dimming Control (for 300~1500mA)

To Adjustment by PWM signal :

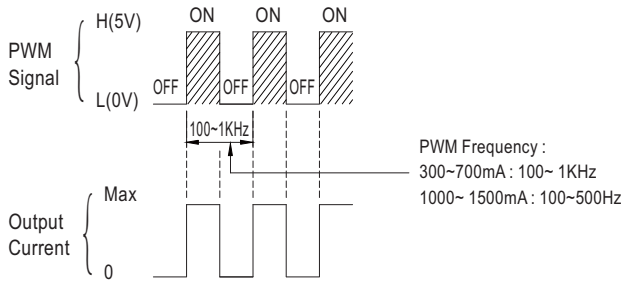


300 ~ 700mA :

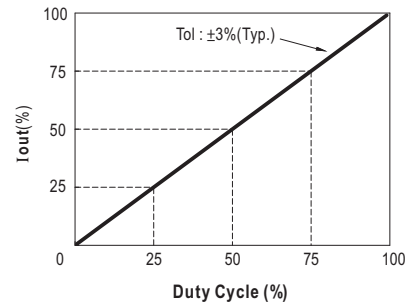
- H: > 3.5~8VDC or open circuit
- L: < 0.5VDC or short

1000 ~ 1500mA :

- H: > 2.6~5.5VDC or open circuit
- L: < 0.4VDC or short

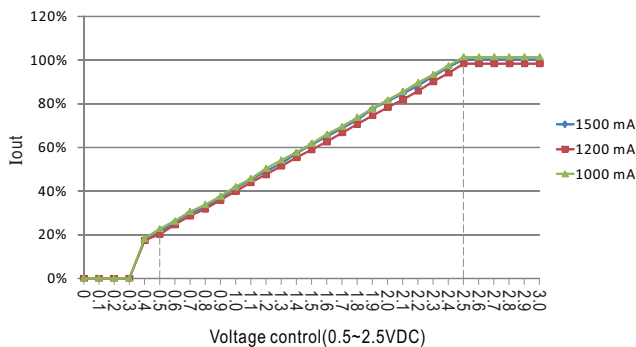
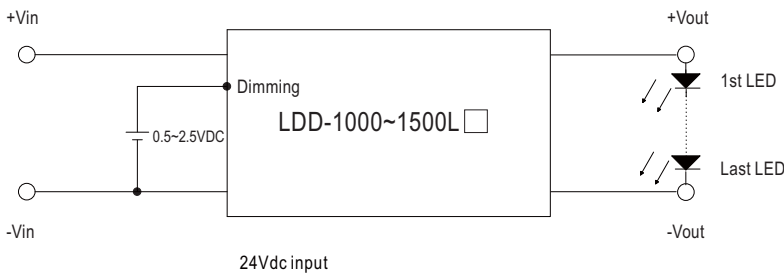


© During PWM dimming operation, the output current will change to PWM style.



■ Analog Dimming Control for 1000~ 1500mA only

To Adjustment by DC voltage :



■ Efficiency VS Output Voltage(Number of LEDs)

Fig-1 12VDC input, 1~3 LEDs(Vf=3V)

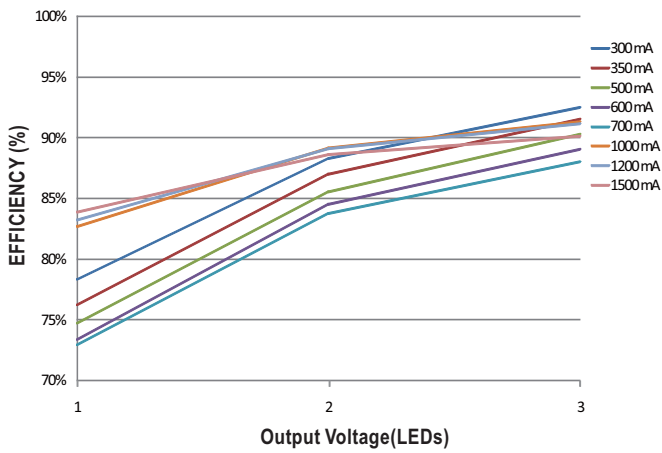


Fig-2 24VDC input, 1~7 LEDs(Vf=3V)

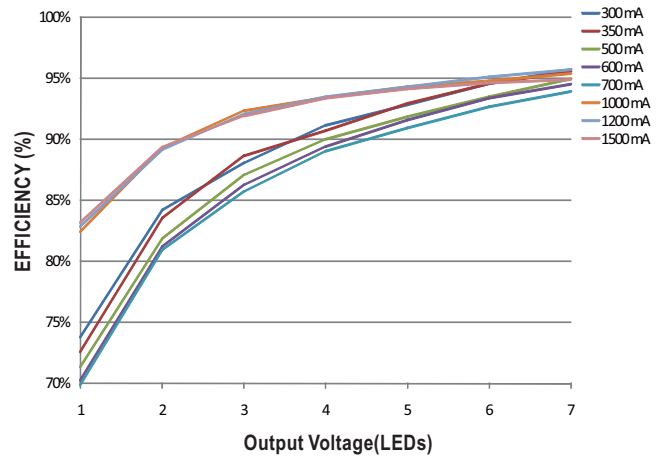
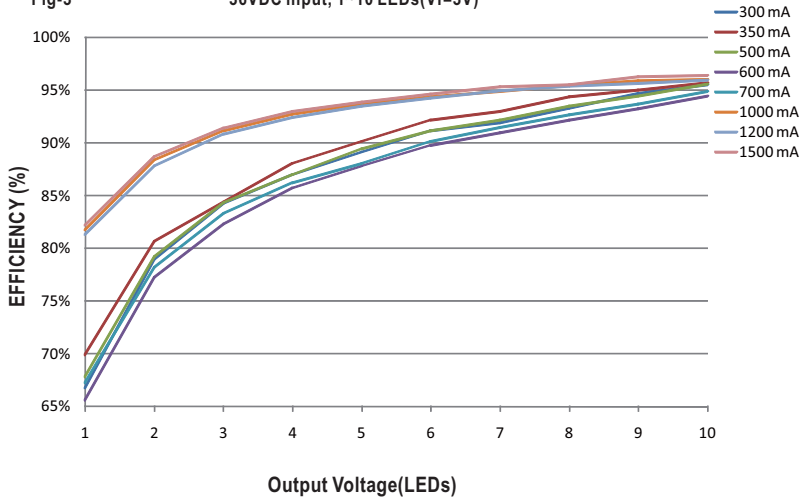


Fig-3 36VDC input, 1~10 LEDs(Vf=3V)



■ Packing

| Standard Tube Packing   | LDD-L              |               |                        |                 |
|---|--------------------|---------------|------------------------|-----------------|
|   | MPQ Per Tube (PCS) | One Tube G.W. | Max. Q'TY/ Carton(PCS) | One Carton G.W. |
| <p>Unit : mm</p> <p>Product</p> <p>Tube Plugs</p> <p>520</p> <p>25.2</p> <p>21.4</p> <p>8.3 8.6</p> <p>Tube pattern</p>                           | 50                 | 280g          | 2500                   | 14.8Kg          |
| <p>Unit : mm</p> <p>4 pcs inside</p> <p>Product</p> <p>Box</p> <p>220</p> <p>45</p> <p>195</p> <p>Antistatic Foam</p> <th colspan="4">LDD-LW</th> | LDD-LW             |               |                        |                 |
|   | MPQ (Box)          | One Box G.W.  | Max. Q'TY/ Carton(PCS) | One Carton G.W. |
| 48  | 430g               | 576           | 5.96Kg                 |                 |

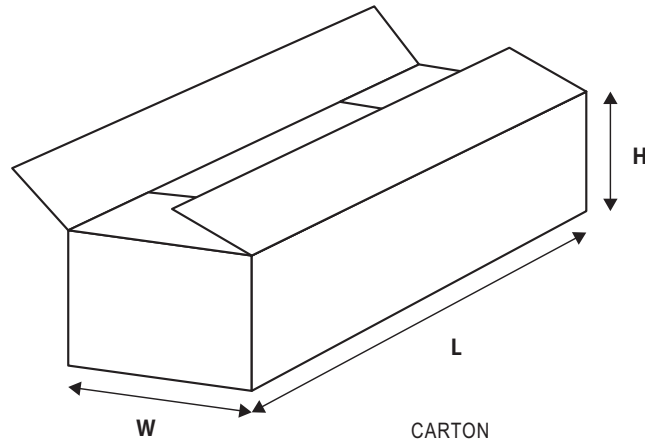
| Standard Tube Packing  | LDD-LS             |               |                        |                 |
|--|--------------------|---------------|------------------------|-----------------|
|  | MPQ Per Tube (PCS) | One Tube G.W. | Max. Q'TY/ Carton(PCS) | One Carton G.W. |
| <p>Unit : mm</p> <p>Product</p> <p>Tube Plugs</p> <p>520</p> <p>14.7</p> <p>10.7</p> <p>16.5</p> <p>3.85 1.2</p> <p>Tube pattern</p> | 19                 | 100g          | 2280                   | 12.8Kg          |
| <p>Unit : mm</p> <p>Product</p> <p>Tube Plugs</p> <p>520</p> <p>24</p> <p>21.3</p> <p>8.472</p> <p>Tube pattern</p>                  | LDD-1000~1500L     |               |                        |                 |
|  | MPQ Per Tube (PCS) | One Tube G.W. | Max. Q'TY/ Carton(PCS) | One Carton G.W. |
|  | 15                 | 260g          | 750                    | 13.8Kg          |



| Standard Tube Packing   | LDD-1000~1500LW    |               |                        |                 |
|---|--------------------|---------------|------------------------|-----------------|
|   | MPQ (Box)          | One Box G.W.  | Max. Q'TY/ Carton(PCS) | One Carton G.W. |
| <p>Unit : mm</p> <p>Product</p> <p>Box</p> <p>220</p> <p>45</p> <p>195</p> <p>Antistatic Foam</p>   | 20                 | 440g          | 240                    | 6.08Kg          |
| <p>Unit : mm</p> <p>Product</p> <p>Tube Plugs</p> <p>510</p> <p>22</p> <p>6</p> <p>9</p> <p>10.2</p> <p>11.5</p> <p>7</p> <p>19.2</p> <p>Tube pattern</p> | LDD-1000~1500LS    |               |                        |                 |
|   | MPQ Per Tube (PCS) | One Tube G.W. | Max. Q'TY/ Carton(PCS) | One Carton G.W. |
| 15  | 240g               | 600           | 10.4Kg                 |                 |

**Standard Tube Packing**

Unit : mm



CARTON  
L600 x W230 x H220

■ **Installation Manual**

Please refer to : <http://www.meanwell.com/manual.html>