TONLIER®

DR025 Series

25W Single Output LED Driver

■ Features

- Constant voltage and current output
- Universal AC input 100～305VAC
- Built-in active PFC function
- High efficiency
- Protections: Short circuit/Over voltage/Over load/Over temperature
- Over temperature Protection: Shut down and latch off o/p voltage, re-power on to recover
- Cooling by free air convection
- Digital, analog or remote control dimming function
- Suitable for LED lighting and LED Electronic display applications
- IP66/67 with Vo/Lo adjusting screws, internal use, avoid ultraviolet irradiation
  IP67 without Vo/Lo adjusting screws, external use
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations

E346360 IP67 RoHS

■General functions

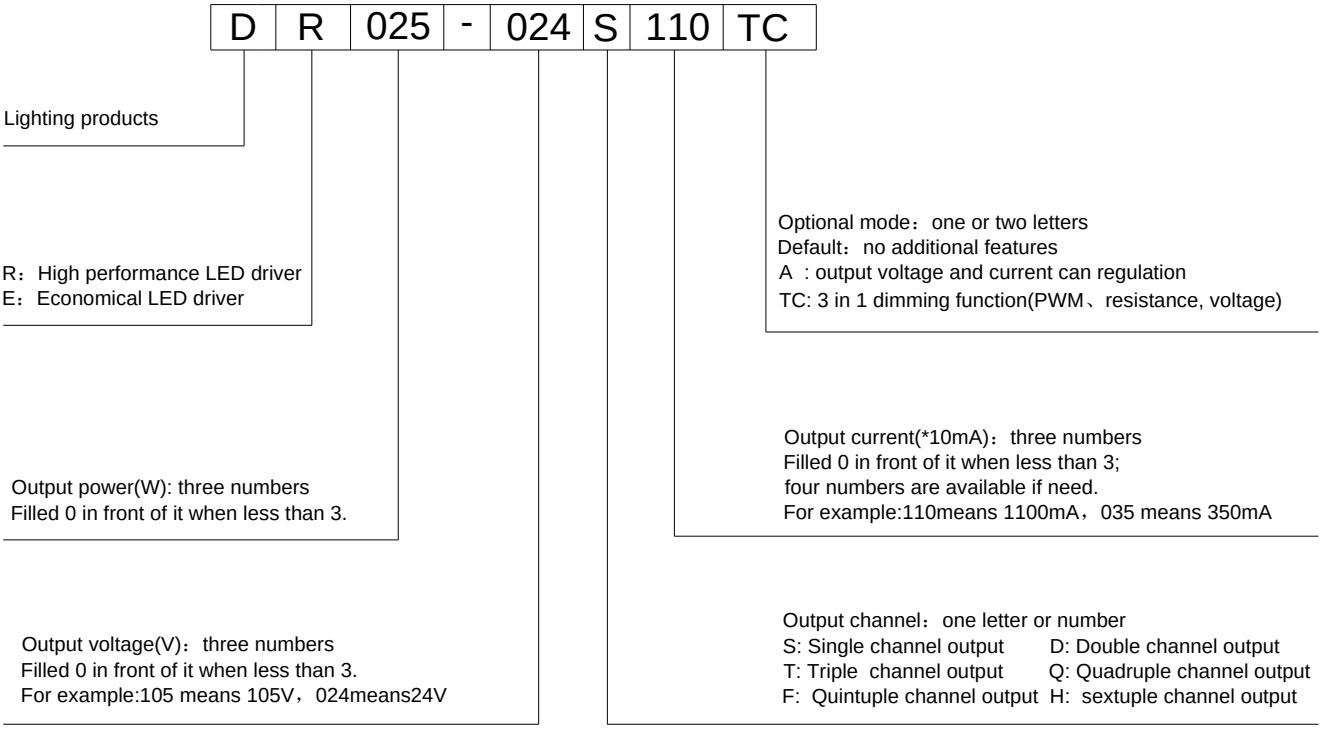
Input Voltage Range	100～305Vac	Input Frequency	50/60Hz
Storage Temperature	-45℃～+85℃	Operating Temperature	-40℃～+60℃
Turn-on Delay Time	3.0S max.	Safety & EMC	UL8750,IEC61347,EN55015
Over Temp Protection	Shut down and latch off o/p voltage	Inrush Current	65A
Power Factor	0.96(220Vac)	Waterproof	IP65/IP67

■Detailed Specification

TABLE 1：

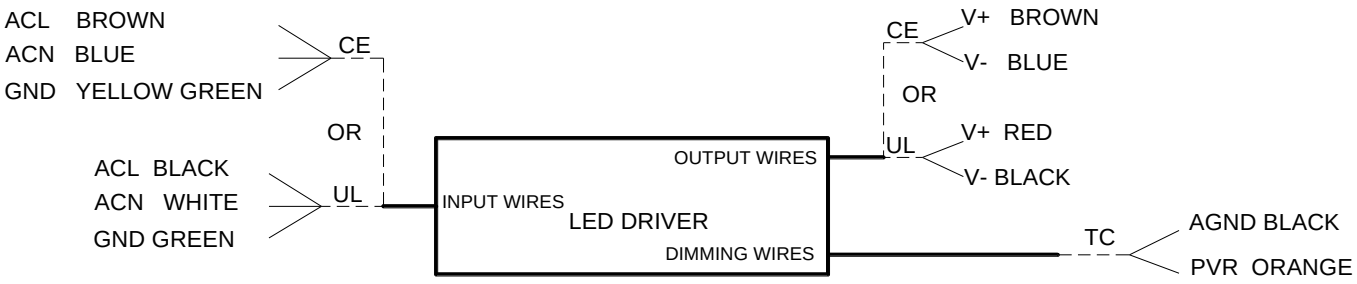
Model		DR025-072S035	DR025-048S052	DR025-036S070	DR025-024S110	DR025-015S170	DR025-012S210
Output	DC Voltage	72Vdc	48Vdc	36Vdc	24Vdc	15Vdc	12Vdc
	Constant Current Range	43～72Vdc	29～48Vdc	22～36Vdc	14～24Vdc	9～15Vdc	7～12Vdc
	Rated DC Current	350mA	520mA	700mA	1100mA	1700mA	2100mA
	Dimming Current Range	10～100%rated output current（≥50% rated output voltage）					
	Ripple and Noise	10%Vo	10%Vo	10%Vo	10%Vo	10%Vo	10%Vo
	Voltage Tolerance	±10%	±10%	±10%	±10%	±10%	±10%
	Voltage Line Regulation	±3%	±3%	±3%	±3%	±3%	±3%
	Voltage Load Regulation	±5%	±5%	±5%	±5%	±5%	±5%
Input	Efficiency	87%	86%	85%	84%	84%	83%
	Power Factor	0.96/220Vac					
	AC Current	0.4A/100VAC,0.22A/220VAC					
	Leakage Current	<0.75mA/230VAC;<0.5mA/120VAC					
Protection	Over Current	Constant current limiting					
	Short Circuit	Non-dimmer type: recover automatically at hiccup ;Dimmer type: Short-circuit power ≤10W.					
	Over Voltage	Shut down at 140%Vo and latch off o/p voltage, re-power on to recover					
Environmental	Operating Humidity	20～95%RH,non-condensing					
	Storage Humidity	10～95%RH					
	Temperature Coefficient	±0.03%/℃（0～50℃）					
	Vibration	10～300HZ,1G ,Period for 60min,each along X、Y、Z axes.					
Safety&EMC	Withstand Voltage	I/P-OP:3.75KVAC; IP-FG:1.56KAC/2.00KVAC(remove discharge tube); O/P-FG:2.00KVAC					
	Isolation Resistance	IP-OP,IP-FG,O/P-FG:100MOhms/500VDC/25℃/70%RH					
	EMC Interference	Compliance to EN55015，EN55022（CISPR22）Class B					
	EMC Emission	Compliance to EN61000-3-2 Class C（≥50%load）;EN61000-3-3					
	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11;ENV50204，EN61547，EN55024，					
Others	Authentication	UL/CE					
	MTBF	600Khrs					
	Dimensions (mm)	191×52×38					
	Max. Case Temp.	Tc max=80℃					
	Net Weight	0.663Kg/pcs					
Note	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 of ambient temperature.						
	2. Ripple & noise are measured：at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.						
	3.Tolerance : includes set up tolerance, voltage line regulation and voltage load regulation.						
	4. Constant current operation region is within 60% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.						
	5. Derating may be needed under low input voltages. Please check the Static Characteristics for more details.						
	6. Safety and EMC design refer to EN60598-1, subject8750(UL),CNS15233, GB7000.1, FCC part18.						
	7. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.						
	8. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.						

■Part number code

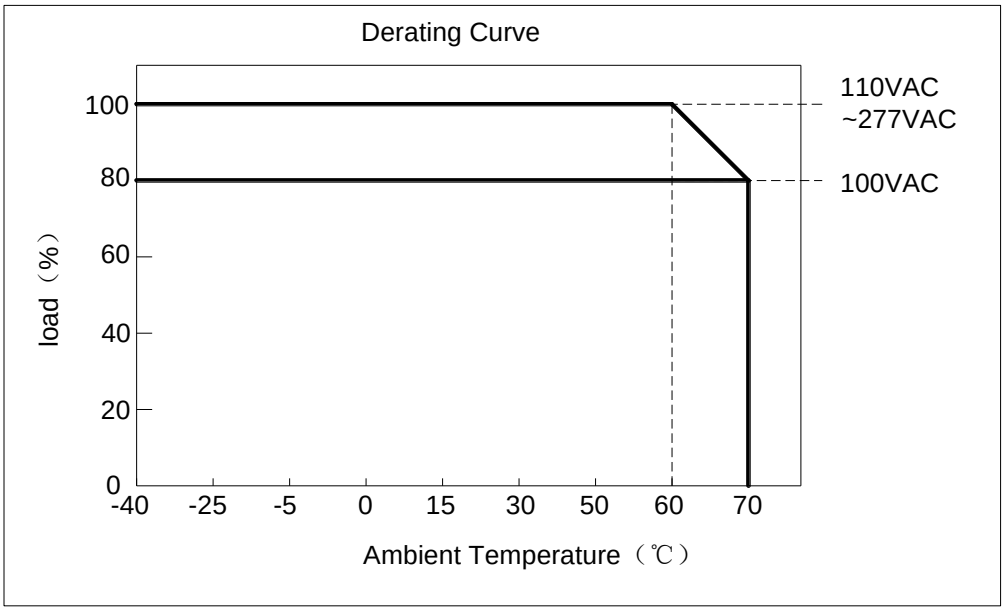


For example: DR025-024S110TC means it is a high performance LED driver, output power 25W, output voltage 24Vdc, output current 1100mA ，single output，with intelligent wire dimming function and isolated output.

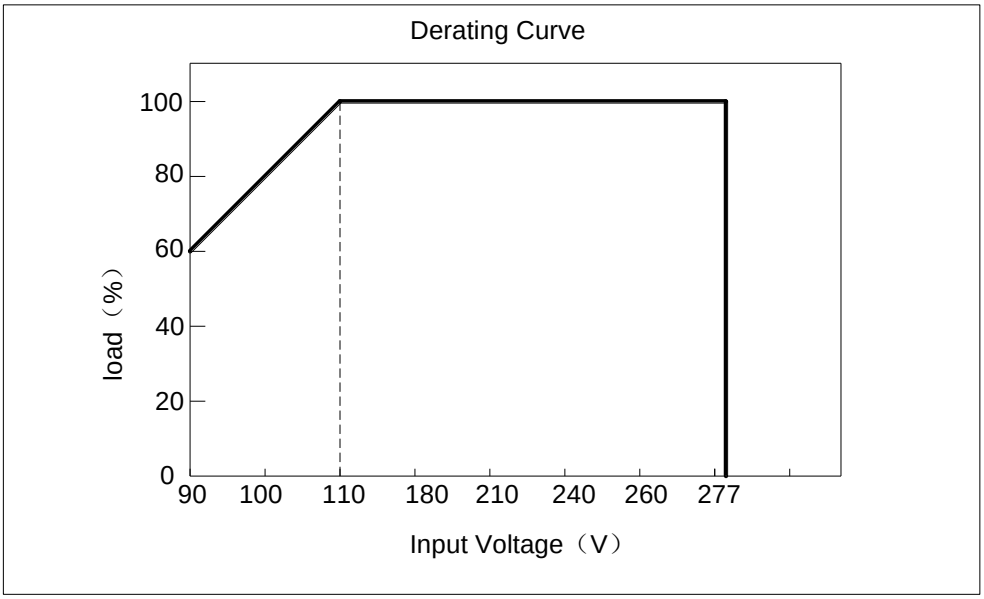
■wiring diagram



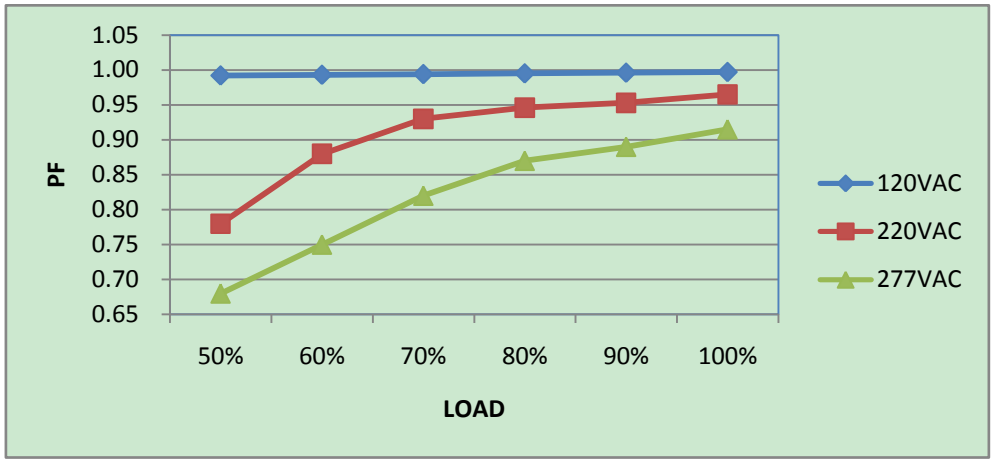
■Derating Curve



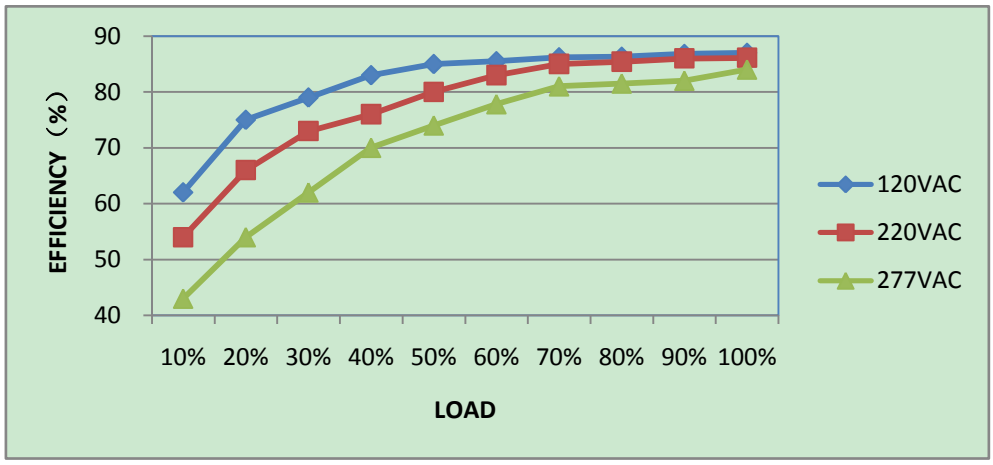
■Static Characteristics



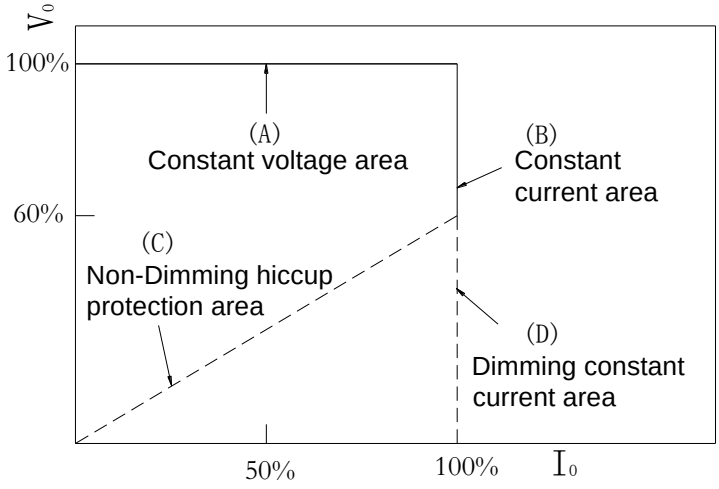
■Power Factor Characteristic（DR025-048S052）



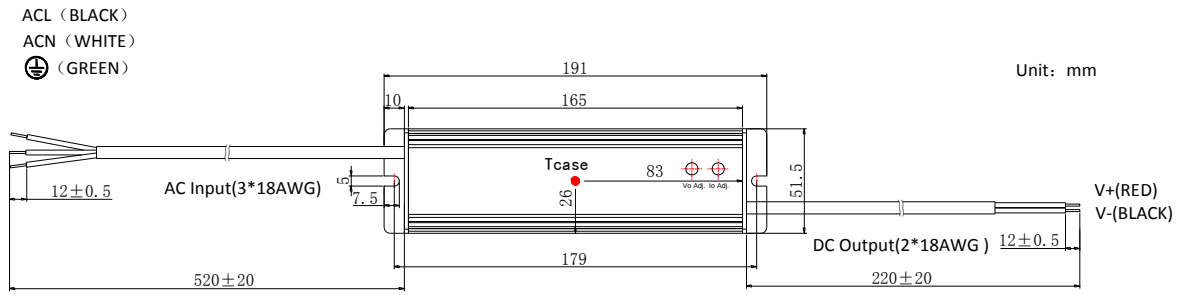
■EFFICIENCY vs LOAD（DR025-048S052）



■Typical LED power supply I-V curve



■Mechanical Outline



※Tcase: Max. Case Temperature

※Power's internal temperature is 15 ℃ warmer than case temperature.

■Non-isolated 3 in 1 dimming function

Reference resistance value for output current adjustment (Typical)

Resistance value	Single driver	10KΩ	20KΩ	30KΩ	40KΩ	50KΩ	60KΩ	70KΩ	80KΩ	90KΩ	100KΩ	OPEN
	Multiple drivers	10KΩ /N	20KΩ /N	30KΩ /N	40KΩ /N	50KΩ /N	60KΩ /N	70KΩ /N	80KΩ /N	90KΩ /N	100KΩ /N	OPEN
Percentage of rated current		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	98%～108%

1 ~ 10V dimming function for output current adjustment (Typical)

Dimming value	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	98%～108%

10V PWM signal for output current adjustment (Typical): Frequency range: 100HZ ~ 3KHz

Duty value	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	98%～108%

■Input and output Dielectric strength

Isolation	Input Wires	Output Wires	Isolated Dimming Control Wires	Chassis
Input Wires	NA	3750	2000	1560/2000(remove discharge tube)
Output Wires	3750	NA	2000	2000
Isolated Dimming Control Wires	2000	2000	NA	2000
Chassis	1560/2000(remove discharge tube)	2000	2000	NA

■Fixed derating-cutoff type temperature protection