



**FEATURES:**

- High Power LED Driver
- Wide (7:1) Input Voltage Range
- Remote Control Function
- 24 Pin DIP Package
- Constant Output Current
- High Efficiency (Up to 96%)
- Dimming Function (0 – 100%)
- Operating Temperature range -40°C - +85°C

**Models**  
**Single output**

Model	Input Voltage (V)	Output Voltage (V)	Output Current (mA)	Efficiency Max (%)
AMLD-3630IZ	5-36	2-32	300	96
AMLD-3635IZ	5-36	2-32	350	96
AMLD-3650IZ	5-36	2-32	500	96
AMLD-3660IZ	5-36	2-32	600	96
AMLD-3670IZ	5-36	2-32	700	96
AMLD-3680IZ	5-36	2-32	800	96
AMLD-3690IZ	5-36	2-32	900	96
AMLD-36100IZ	5-36	2-32	1000	96
AMLD-36110IZ	5-36	2-32	1100	96
AMLD-36120IZ	5-36	2-32	1200	96

NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

**Input Specifications**

Parameters	Nominal	Typical	Maximum	Units
Voltage range	24	5-36	36	VDC
On/Off Control (Analog Control)	ON: Open or 0V > V < 0.6V			
Input voltage range (0-12Vdc) (Leave open if not used)	OFF: 0.6V > V < 5V (1mA Max)			
Dimming Control (Digital Control)	Max PWM Frequency (10%~90%) 200Hz			
Dimming Control (Analog Control)	0-4.5V (1mA max) Analog Voltage (0%~100%) <b>models:</b> AMLD-3630IZ, AMLD-3635IZ, AMLD-3650IZ			
Input voltage range (0-12Vdc)* (Leave open if not used)	0-6.5V (1mA max) Analog Voltage (0%~100%) <b>models:</b> AMLD-3660IZ, AMLD-3670IZ, AMLD-3680IZ, AMLD-3690IZ, AMLD-36100IZ, AMLD-36110IZ, AMLD-36120IZ			

\* NOTE: Exceeding 12Vdc on Dimming Control pin will damage the converter.

**Output Specifications**

Parameters	Conditions	Typical	Maximum	Units
Current accuracy		±2		%
Short Circuit protection	Regulated at the rated current for each model			
Output Open Protection	No Load			
Max load capacitance			100	µF
Ripple & Noise	20MHz Bandwidth	120		mV p-p

**General Specifications**

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	260		KHz
Operating temperature		-40 to +85		°C
Storage temperature		-40 to +125		°C
Max Case temperature			100	°C
Cooling	Free Air Convection			
Thermal Impedance		13.17		°C/W
Humidity			95	% RH
Case material	Non-Conductive Black Plastic			

### General Specifications (continued)

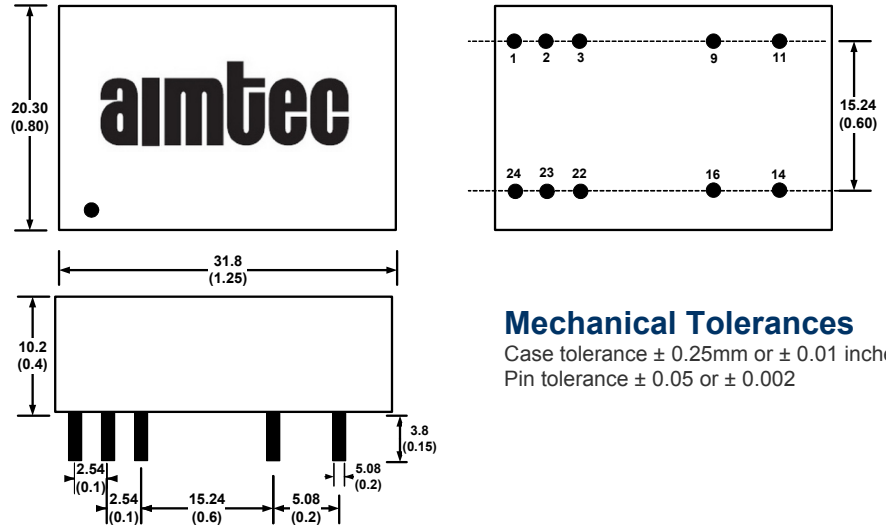
Parameters	Conditions	Typical	Maximum	Units
Potting material		Epoxy (Flammability UL94V-0)		
Weight		12		g
Dimensions (L x W x H)		1.25 x 0.80 x 0.40 inches	31.80 x 20.30 x 10.20 mm	

### Pin Out Specifications

Pin	Single
1	Remote On/Off
2	-Vin
3	-Vin
9	NC
11	NC
14	LED +
16	LED -
22	+Vin
23	+Vin
24	DIM

NC: Not Connected

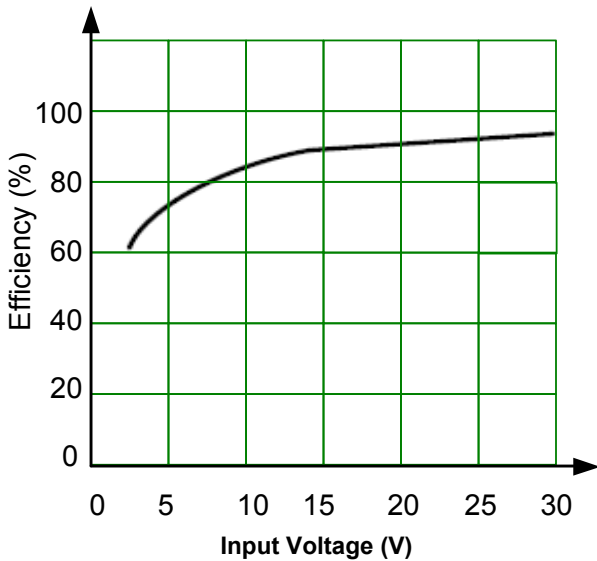
### Dimensions



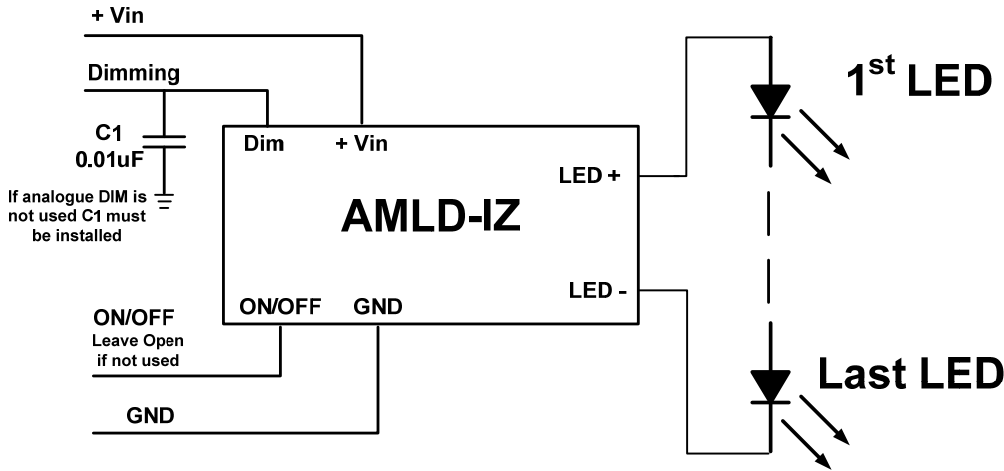
### Mechanical Tolerances

Case tolerance  $\pm 0.25\text{mm}$  or  $\pm 0.01$  inches  
Pin tolerance  $\pm 0.05$  or  $\pm 0.002$

### Efficiency vs Input Voltage

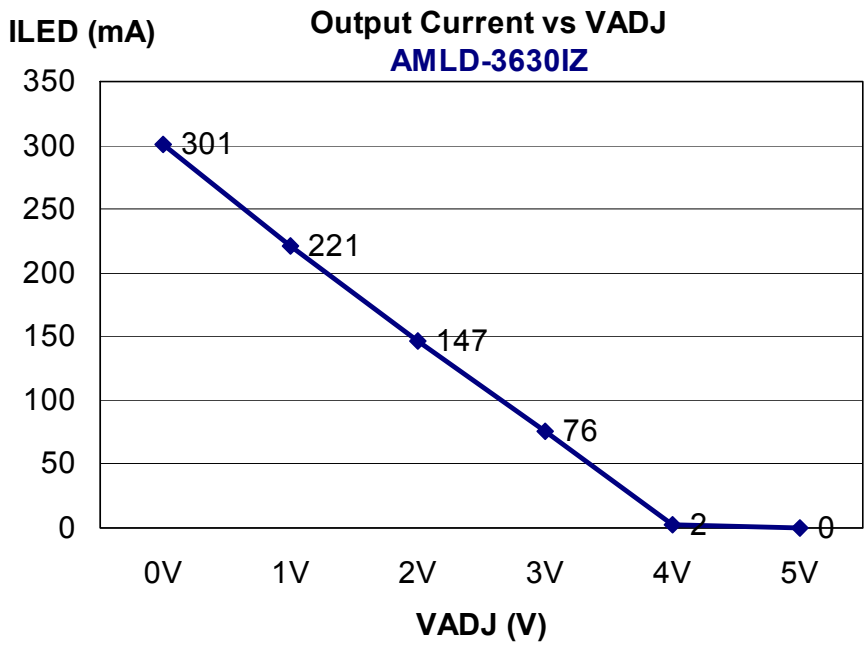


**Application Circuit**

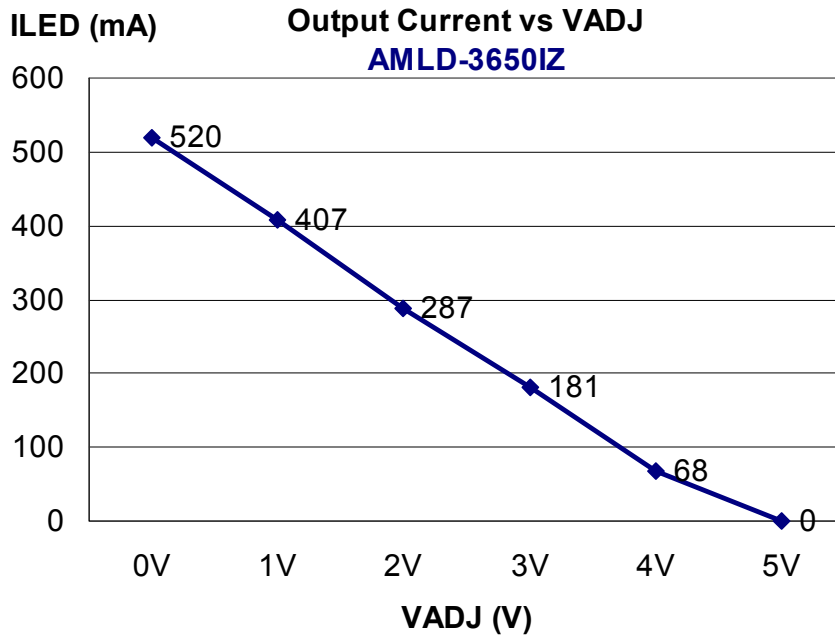
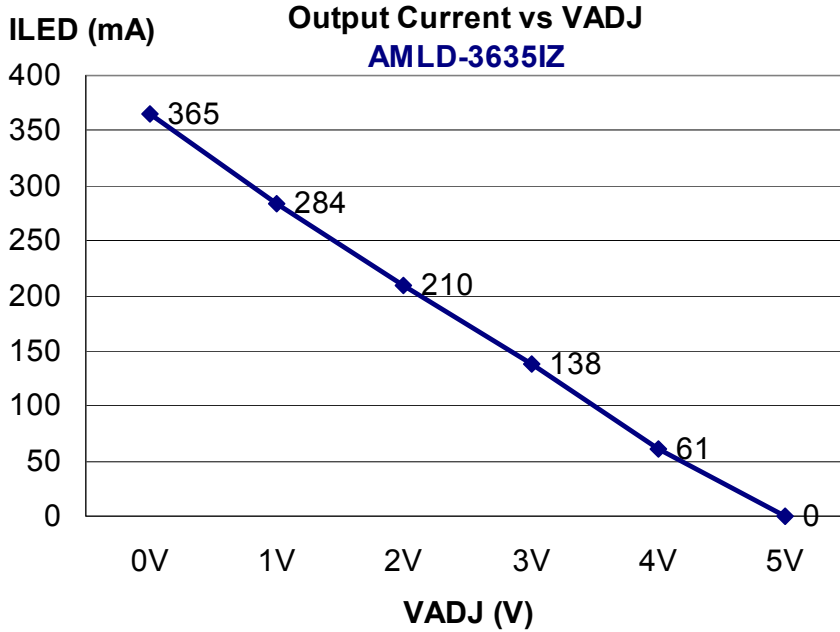


**Note:** The relation between input and output voltage for AMLD-IZ LED Driver step-down converter series is:  
 $V_{in} - 4V \geq V_{out} \geq \text{Total LED voltage}$   
 $V_{out} / \text{LED voltage} = \text{LED quantity}$

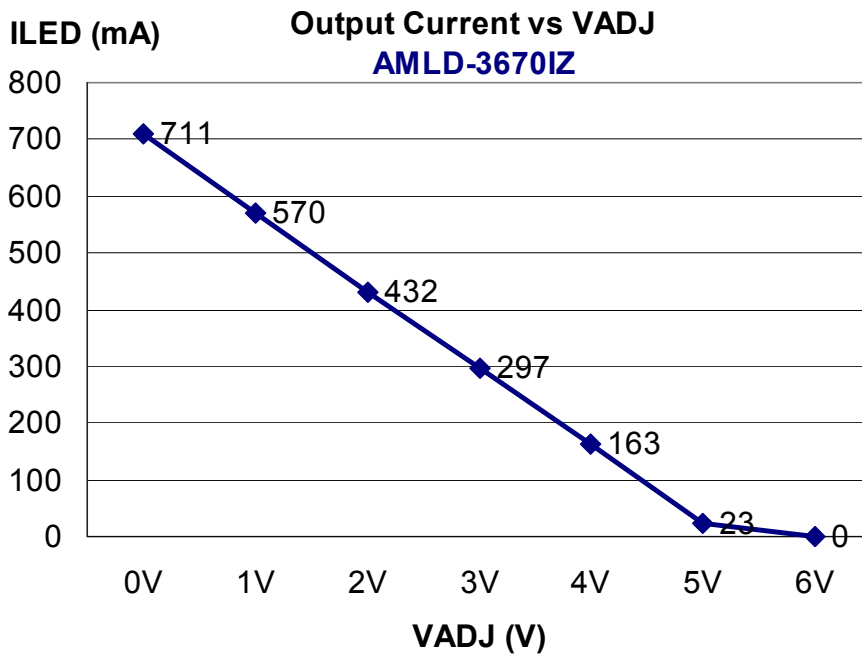
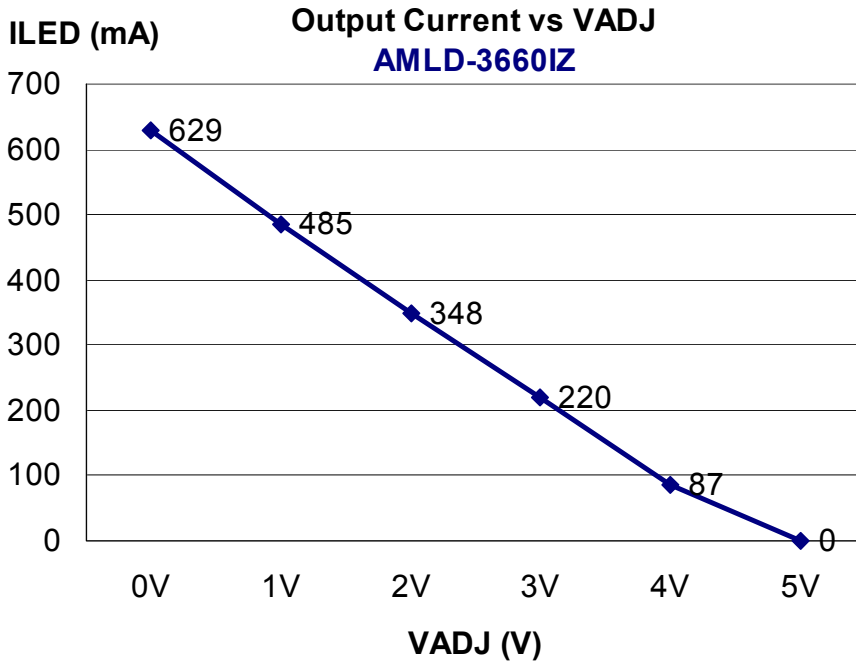
**Output Current Versus Dimming Voltage**



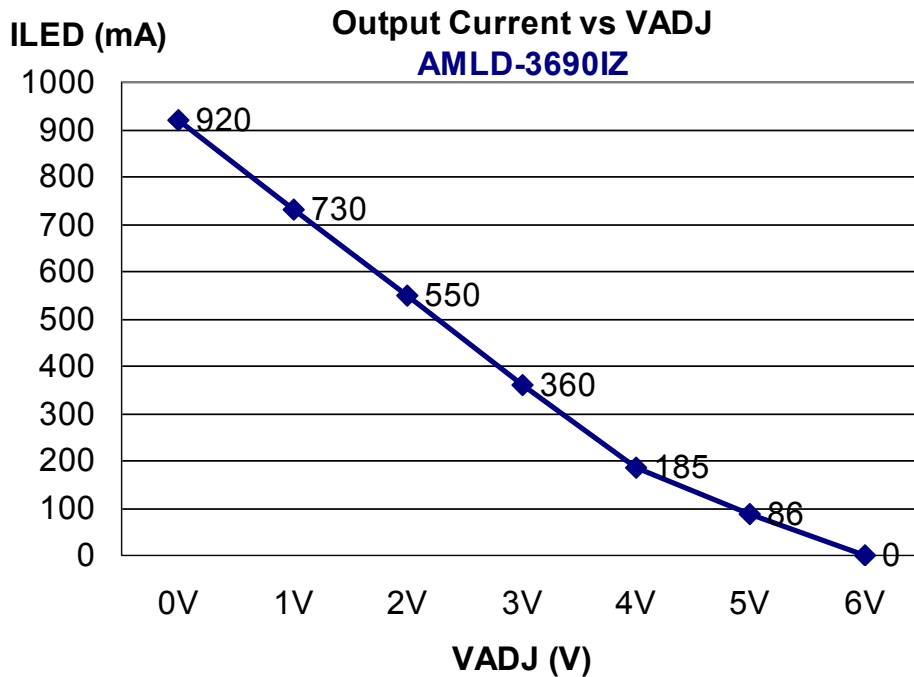
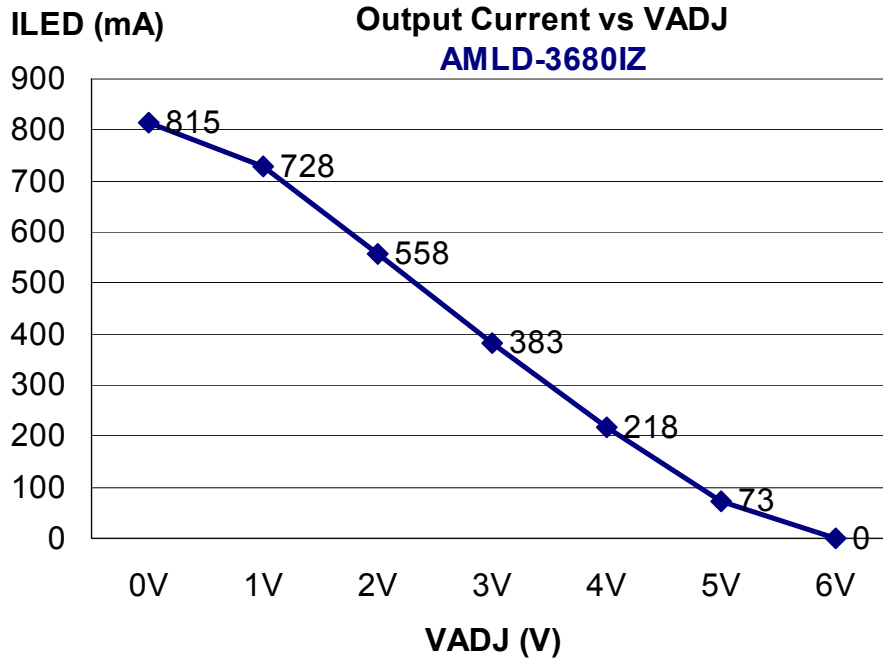
**Output Current vs Dimming Voltage (continued)**



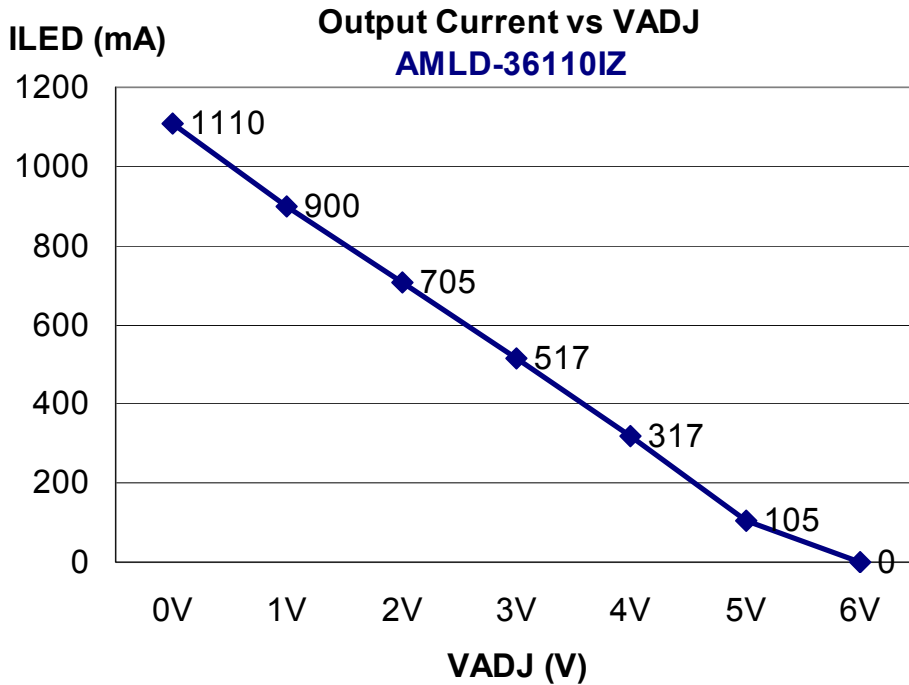
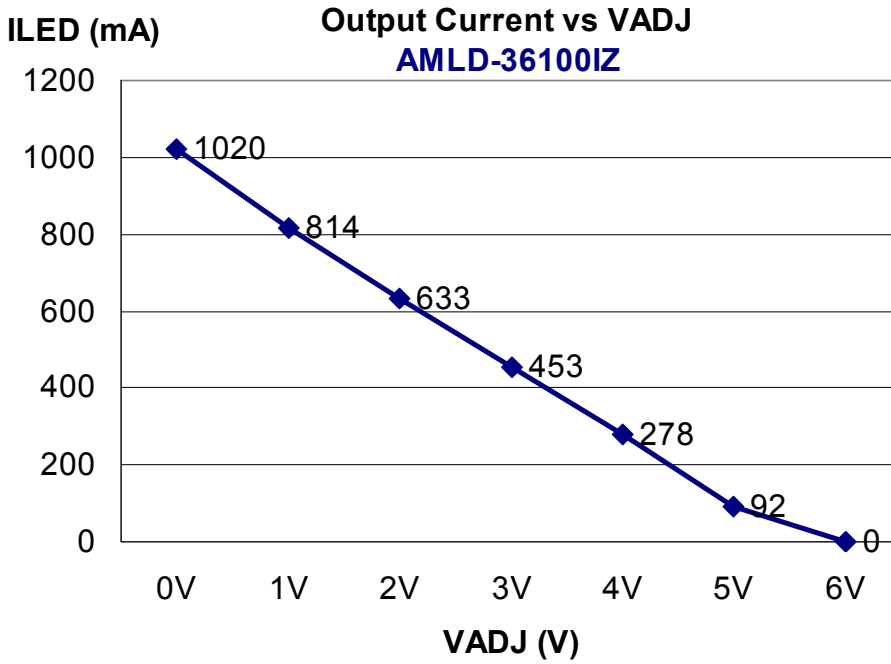
**Output Current vs Dimming Voltage (continued)**



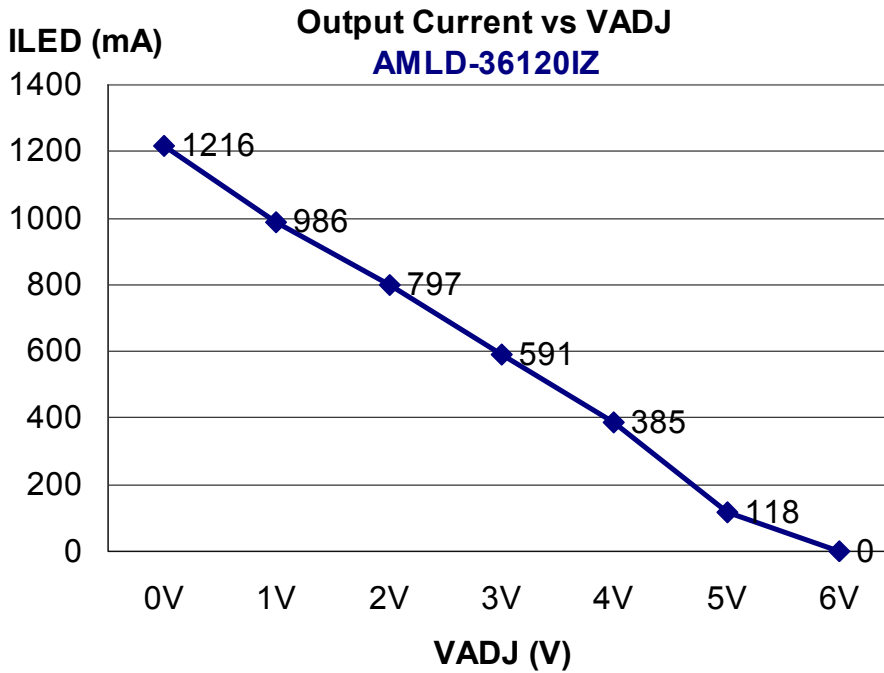
**Output Current vs Dimming Voltage (continued)**



**Output Current vs Dimming Voltage (continued)**



**Output Current vs Dimming Voltage (continued)**



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