TC3228O15-B20

Multi-Wavelength PLCC Type

Features

- PLCC Type package
- High reliability
- RoHS compliance

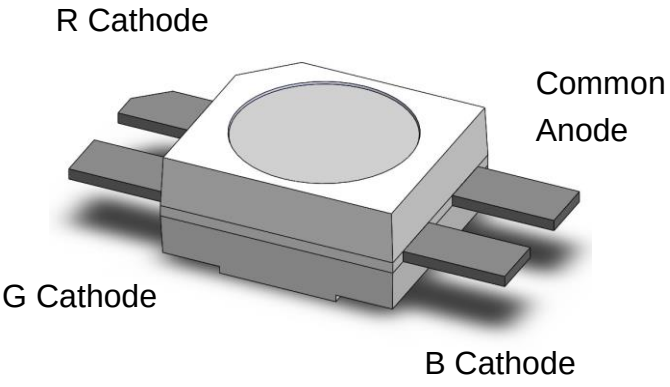
Applications

- General lighting
- Switch light
- Decorative and Entertainment lighting

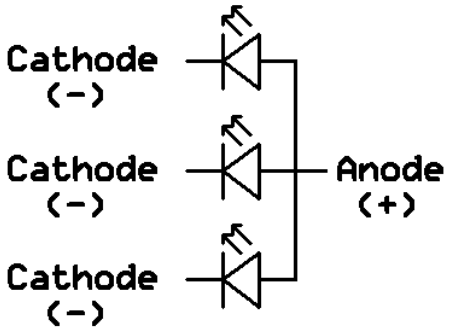
Description

The TC3228O15-B20 package has high efficacy, high power consumption, wide viewing angle and a compact form factor. These features make this package an ideal LED for all lighting applications.

Package Outline



Schematic



Absolute Maximum Rating at 25^{0}C

Symbol	*Parameters*		*Ratings*	*Units*	*Notes*
I_F	Continuous Forward Current	R	20	mA	
		G	20		
		B	20		
I_{FP}	Peak Forward Current	R	60	mA	1
		G	60		
		B	60		
T_{opr}	Operating Temperature		-40 ~ +85	^{0}C	
T_{stg}	Storage Temperature		-40 ~ +100	^{0}C	
T_{sol}	Soldering Temperature		260	^{0}C	2
P_D	Power Dissipation at(or below) 25℃ Free Air Temperature	R	70	mW	
		G	100		
		B	100		

Electro-Optical Characteristics *TA = 25°C (unless otherwise specified)*

Optical Characteristics

Symbol	*Parameters*	*Color*	*Test Conditions*	*Min*	*Typ*	*Max*	*Units*	*Notes*
Iv	Luminous Intensity	R	I_F=5mA	150	-	200	mcd	3
		G	I_F=5mA	600	-	700		
		B	I_F=5mA	120	-	170		
		W	I_F=5mA	870	-	1070		
λd	Dominant Wavelength	R	I_F=5mA	620	-	625	nm	4
		G	I_F=5mA	525	-	530		
		B	I_F=5mA	465	-	470		
θ1/2	Angle of Half Intensity	R/G/B	I_F=5mA	-	±60	-	deg	

Electrical Characteristics

Symbol	*Parameters*	*Color*	*Test Conditions*	*Min*	*Typ*	*Max*	*Units*	*Notes*
V_F	Forward Voltage	R	I_F=5mA	1.8	-	2.2	V	5
		G	I_F=5mA	2.4	-	2.8		
		B	I_F=5mA	2.5	-	2.9		
I_R	Reverse Current	R/G/B	V_R=5V	-	-	10	uA	

Notes:

1. I_{FP} Conditions--Pulse Width≦ 100μs and Duty≦ 10%.
2. Soldering time≦ 5 seconds.
3. Tolerance of Luminous Intensity±10%.
4. Tolerance of Dominant Wavelength±1nm.
5. Tolerance of Forward Voltage±0.1V.

Typical Characteristic Curves

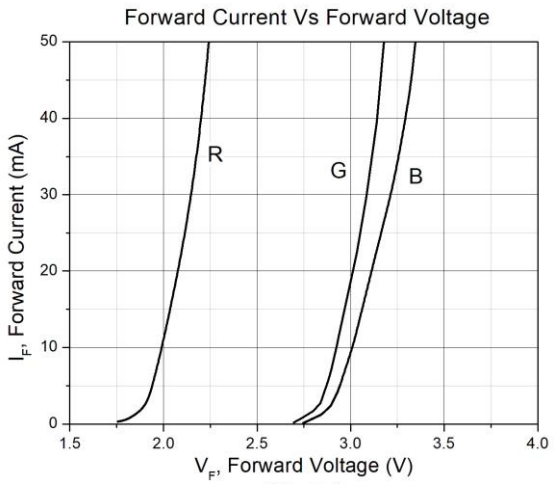


Figure 1

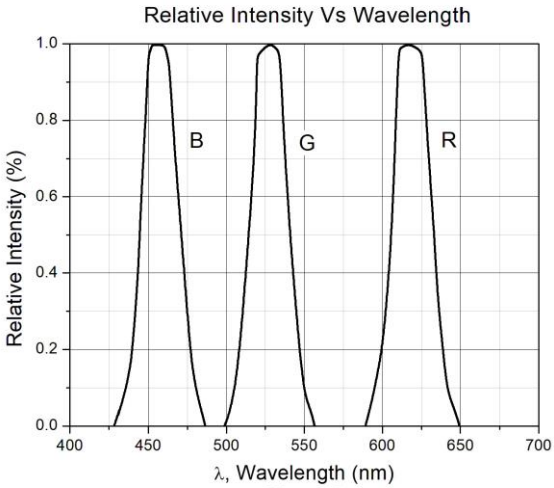


Figure 2

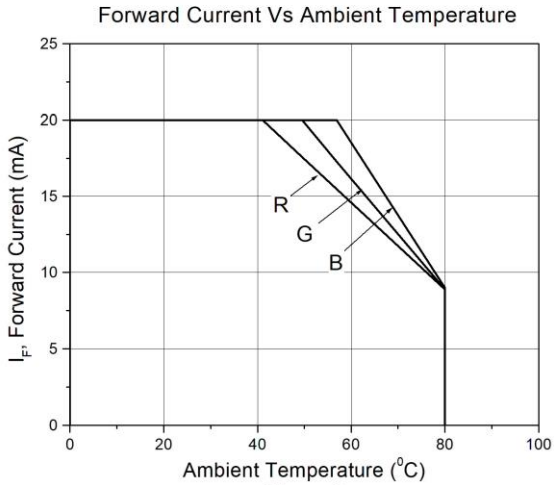


Figure 3

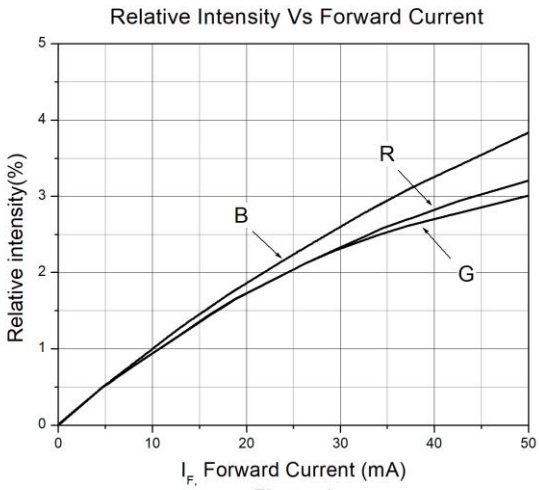


Figure 4

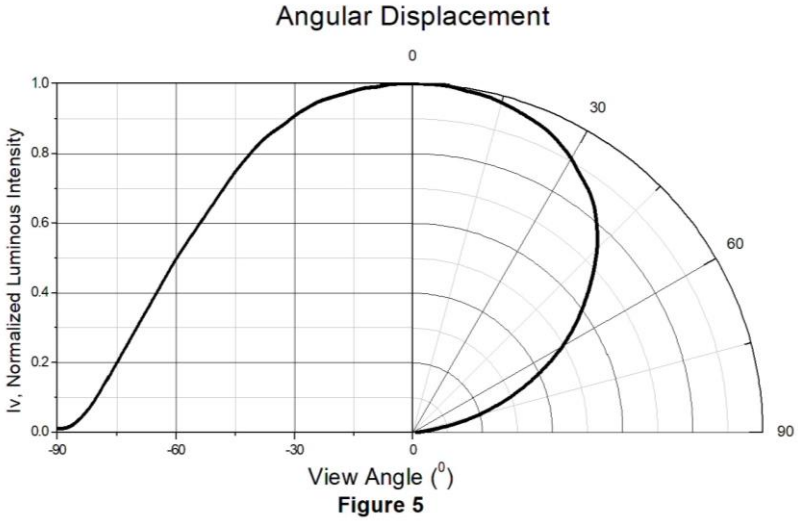
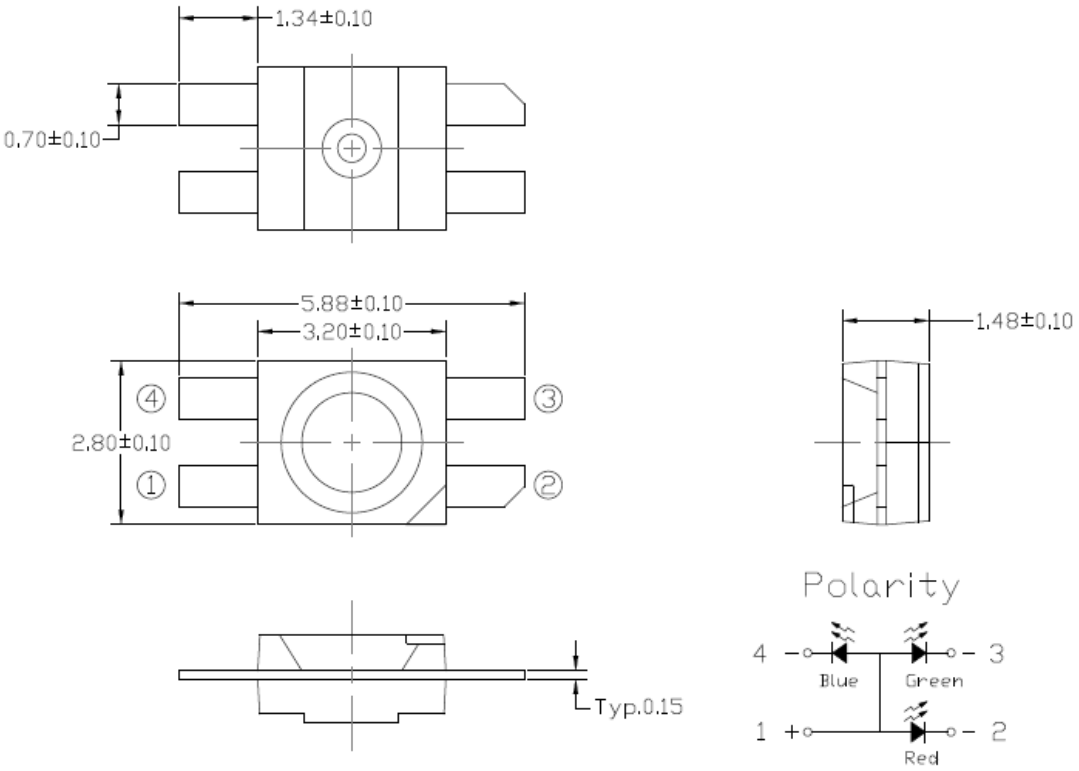
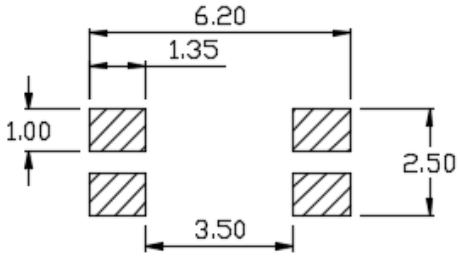


Figure 5

Package Dimension *All dimensions are in mm, unless otherwise stated. Tolerances unless dimensions ±0.1mm.*



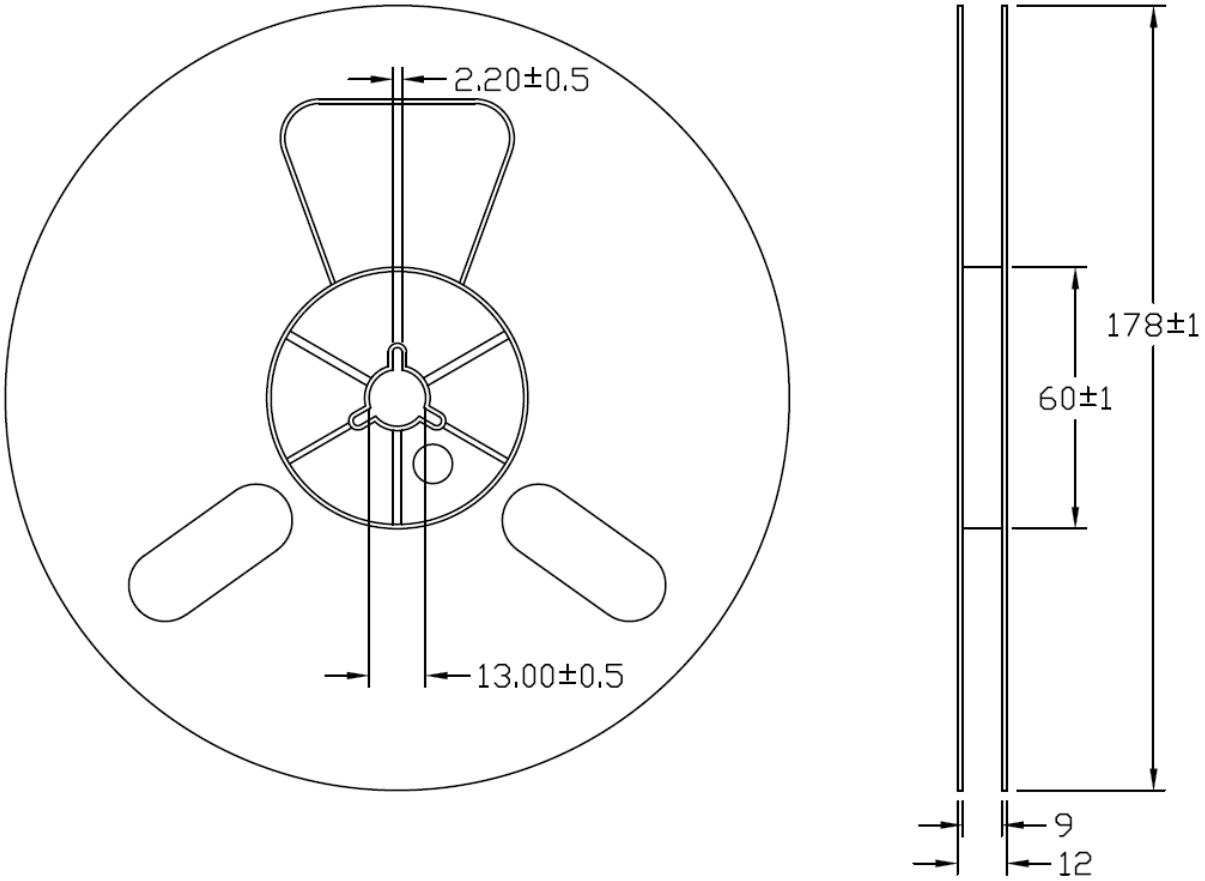
Recommended Soldering Mask *All dimensions are in mm, unless otherwise stated*



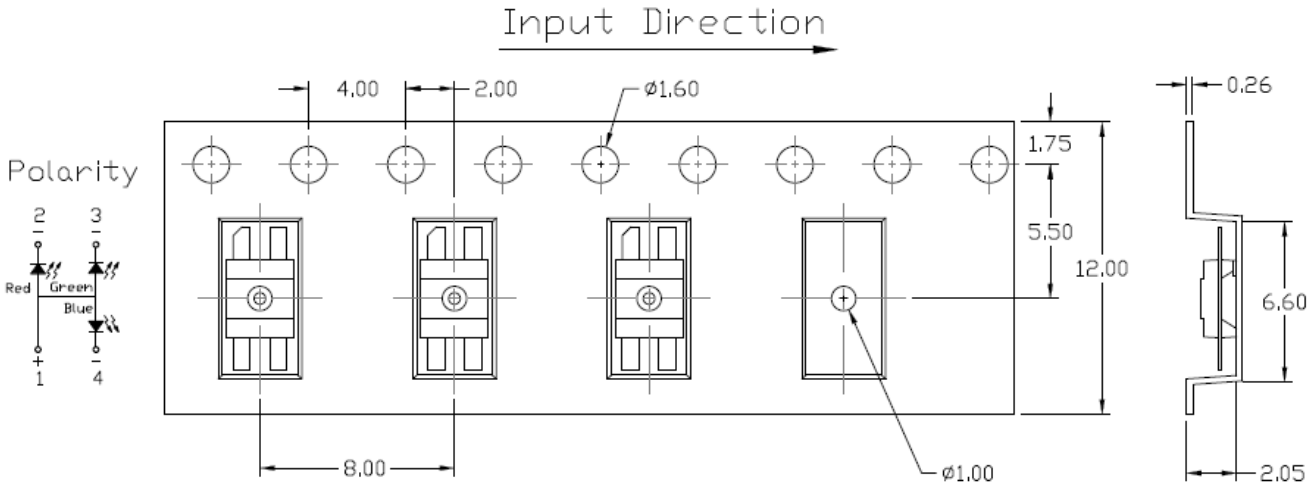
Ordering Information

Part Number	*Description*	*Quantity*
TC3228O15-B20	1 Reel	2500 pcs

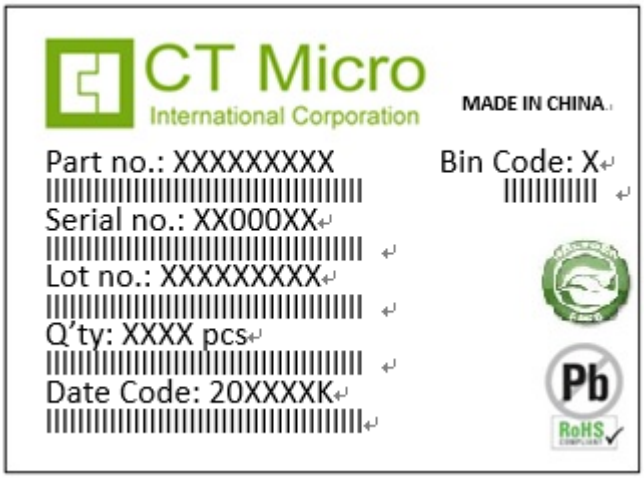
Reel Dimension *All dimensions are in mm, unless otherwise stated*



Tape Dimension *All dimensions are in mm, unless otherwise stated*



Label Form Specification



Part no: CTM Production Number

Serial no: Production Number

Lot no: Lot number

Q'ty: Packing Quantity

Date Code: Manufacture Date

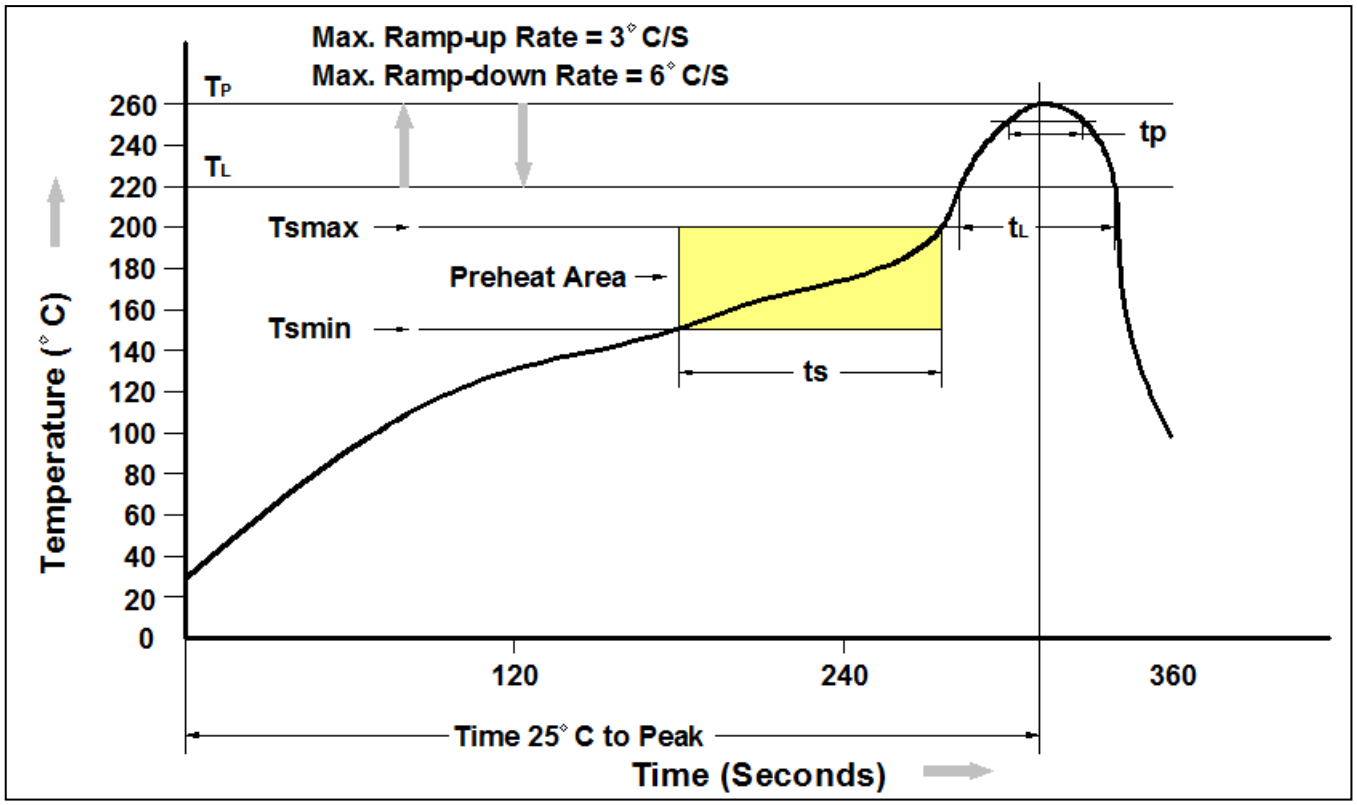
Bin Code: Iv Ranks

MADE IN CHINA: Production Place

Storage Condition

1. Do not open moisture proof bag before the products are ready to use.
2. The moisture barrier bag should be stored at 30°C and 90%R.H. max. before opening. Shelf life of non-opened bag is 12 months after the bag sealing date.
3. After opening the moisture barrier bag floor life is 168h at 30°C/60%RH. max. Unused LEDs should be resealed into moisture barrier bag. (Refer to J-STD-020 Standard)
4. If the moisture absorbent material has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the J-STD-033 Standard conditions.

Reflow Profile



Profile Feature	Pb-Free Assembly Profile
Temperature Min. (Tsmin)	150°C
Temperature Max. (Tsmax)	200°C
Time (ts) from (Tsmin to Tsmax)	60-120 seconds
Ramp-up Rate (t_L to t_P)	3°C/second max.
Liquidous Temperature (T_L)	217°C
Time (t_L) Maintained Above (T_L)	60 – 150 seconds
Peak Body Package Temperature	260°C +0°C / -5°C
Time (t_P) within 5°C of 260°C	30 seconds
Ramp-down Rate (T_P to T_L)	6°C/second max
Time 25°C to Peak Temperature	8 minutes max.

DISCLAIMER

CT MICRO RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. CT MICRO DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

CT MICRO ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT EXPRESS WRITTEN APPROVAL OF CT MICRO INTERNATIONAL CORPORATION.

1. *Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, or (c) whose failure to perform when properly used in accordance with instruction for use provided in the labelling, can be reasonably expected to result in significant injury to the user.*
2. *A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.*