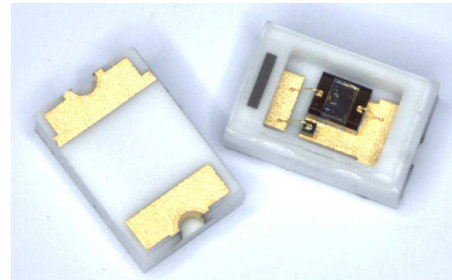
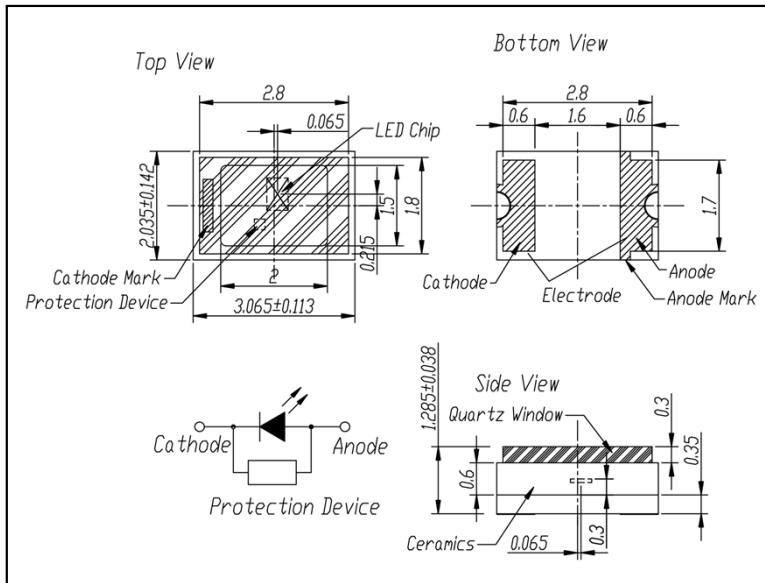


# MODEL xFxVK-2F001 series

## 3.0x2.0mm SMD Type

### Mechanical Specifications and Materials (Unit:mm)



### Product ID

- 265nm: DF7VK-2F001**
- 280nm: DF8VK-2F001**
- 310nm: UF1VK-2F001**
- 325nm: UF3VK-2F001**
- 340nm: UF4VK-2F001**

### Typical Optical-Electrical Characteristics ( $I_F=20\text{mA}$ , $T_a=25^\circ\text{C}$ )

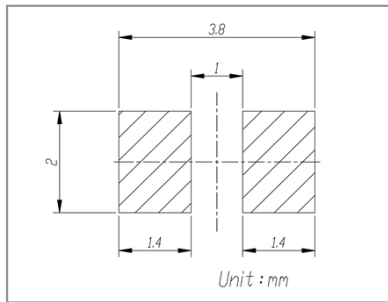
Item	Symbol	Unit	DF7VK	DF8VK	UF1VK	UF3VK	UF4VK
Peak Wavelength	$\lambda_p$	nm	265±5	280±10	310±5	325±5	340±5
Radiant Flux	$P_o$	mW	0.9	1.3	0.83	1.2	1.6
Full Width at Half Maximum	$\Delta\lambda$	nm	13	12	15	11	9
Forward voltage	$V_F$	V	8-9	6.5	6-7	4.5	4.0
Viewing Half Angle	$2\theta_{1/2}$	deg.	115	115	115	115	115
Thermal resistance*	$R\theta_{J-Ref}$	$^\circ\text{C/W}$	-	150±5	-	-	-

\*Thermal resistance  $R\theta_{J-Ref}$  from LED pn-junction to a reference point

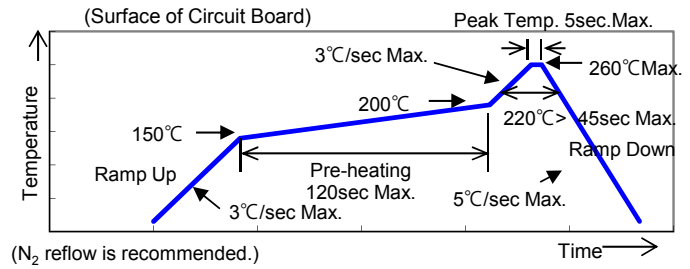
### Absolute Maximum Ratings

Item	Symbol	Unit	Ambient Temperature	
Forward Current	$I_{Fmax}$	mA	40	$T_a=25^\circ\text{C}$
Operating Temperature	$T_{OPR}$	$^\circ\text{C}$	-20 ~ +80	
Storage Temperature	$T_{STG}$	$^\circ\text{C}$	-30 ~ +85	
Soldering Temperature	$T_{SOL}$	$^\circ\text{C}$	260	(within 5sec)

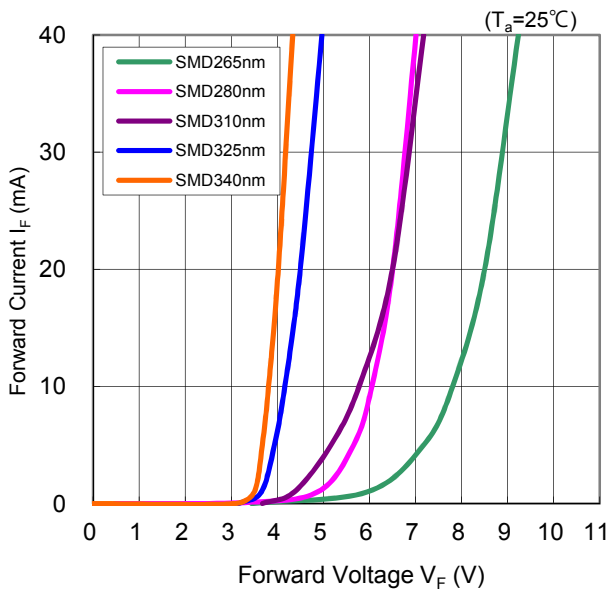
### Recommended solder pad



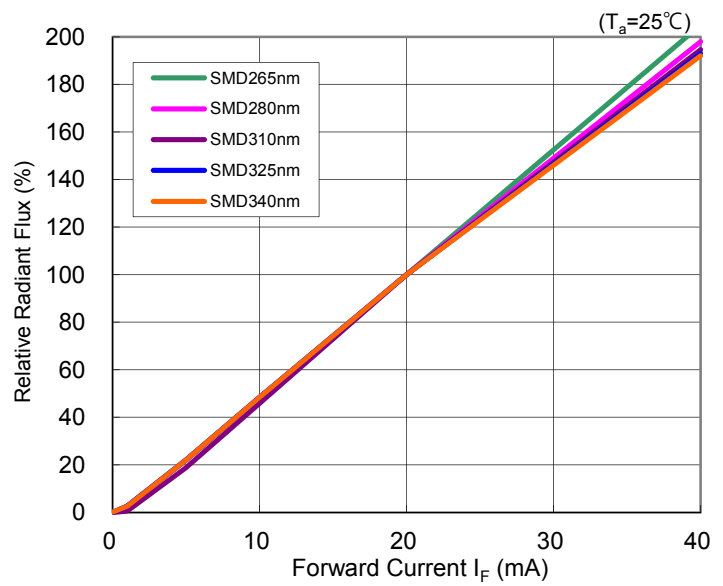
### Reflow soldering profile



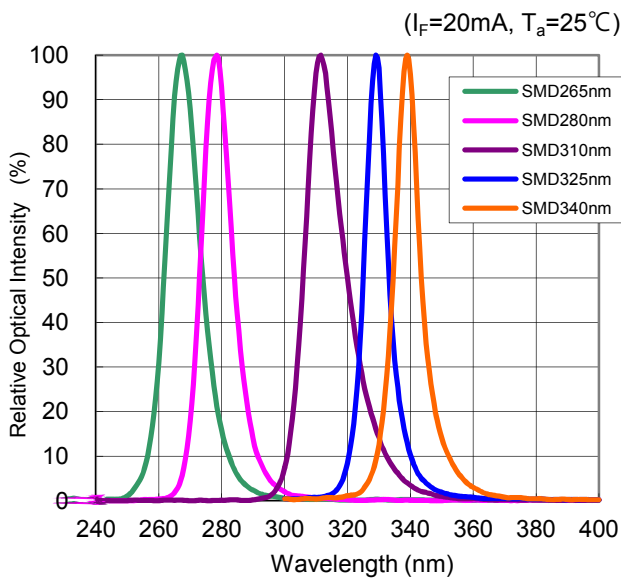
### Forward Current vs Forward Voltage



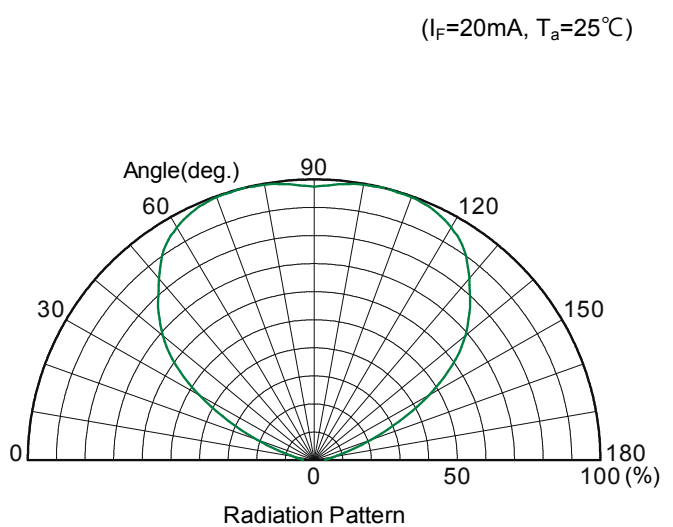
### Forward Current vs Radiant Flux



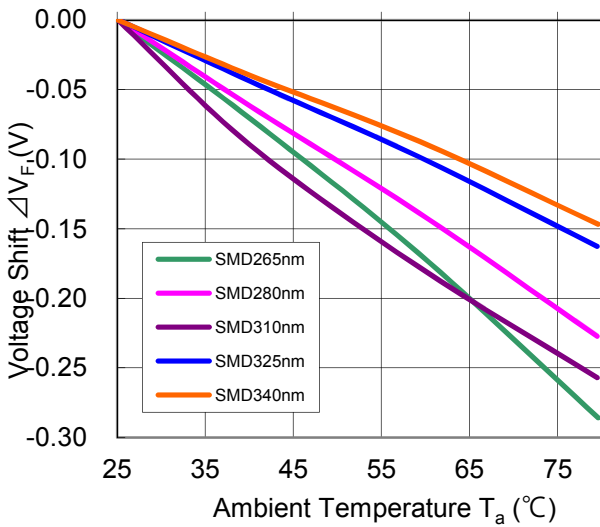
### Relative Intensity vs Peak Wavelength



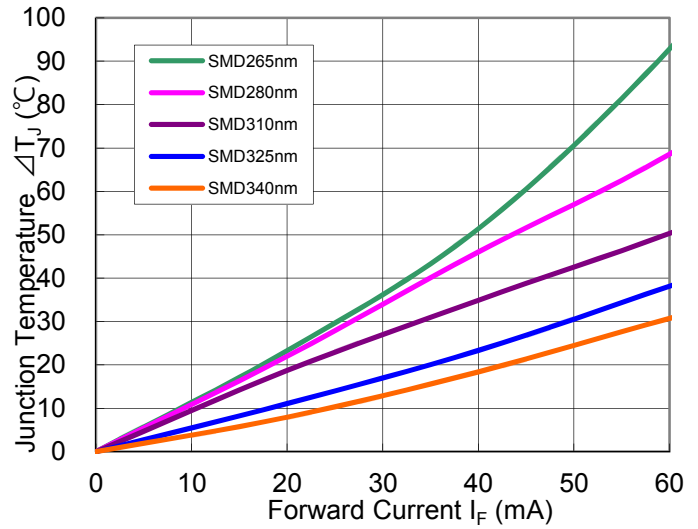
### Radiation Pattern



### Voltage Shift vs Ambient Temperature

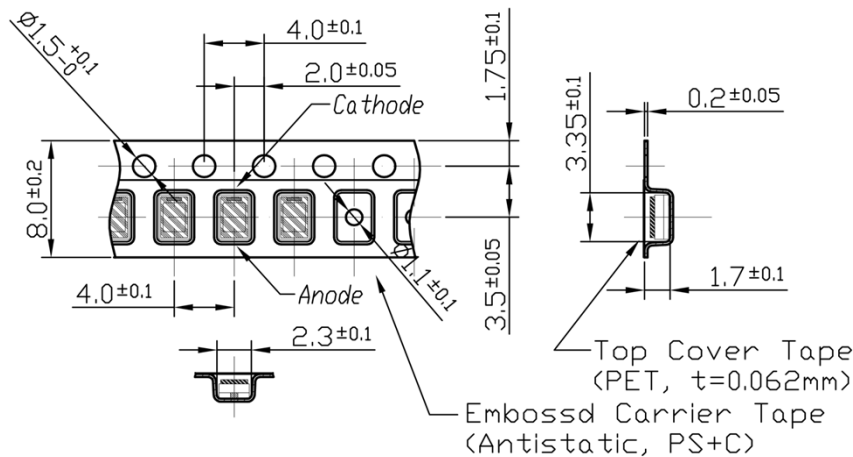


### Junction Temperature vs Forward Current



### Packing of Products

#### Taping Outline Dimensions



### Thermal Resistance Equation

The basic equation governing the thermal calculation is defined below.

$$R_{J-Ref} = (\Delta T_{J-Ref}) / P_D = (T_J - T_{Ref}) / P_D \quad (1)$$

Where:

$R_{\theta_{J-Ref}}$  = pn-junction to reference point thermal resistance (°C/W)

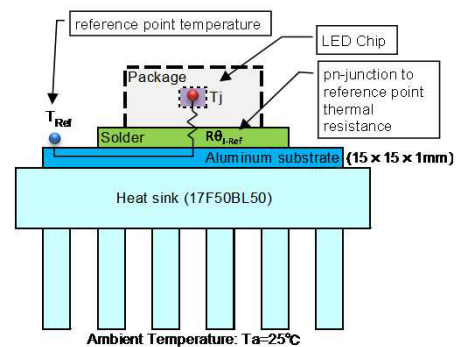
$T_J$  = pn-junction temperature (°C)

$T_{Ref}$  = reference point temperature (°C)

$P_D$  = power dissipation = ( $I_F \times V_F$ ):(W)

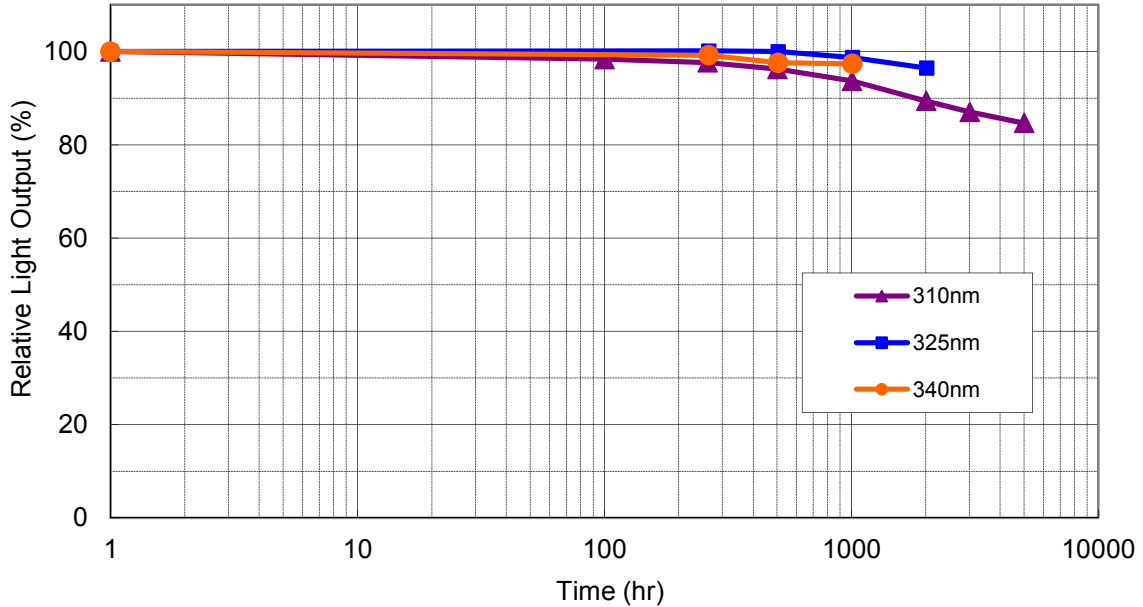
Rewrite equation (1):


$$T_J = T_{Ref} + (R_{\theta_{J-Ref}} \times P_D) \quad (2)$$




### Reliability prospect

$T_a = 25^\circ\text{C}$ ,  $I_F = 40\text{mA}$



 This is just a reference; reliability performance may change in the condition for purposes and applications.

	<b>CAUTION</b>
	<ul style="list-style-type: none"><li>- LEDs emit very strong UV radiation.</li><li>- Don't look directly into the LED light.</li><li>UV radiation can harm your eyes.</li><li>- To prevent even inadequate exposure, wear protective eyewear.</li><li>- If LEDs are embedded in devices, please indicate warning labels against the UV light LED used.</li><li>- Keep out of reach of children.</li><li>- Specification and dimension are subject to change for improvement without notice.</li></ul>

Issued January 2016

SPEC information (included design, dimension, and typical data) would be changed without prior notice.

Lead ( Pb ) Free Product – RoHS Compliant