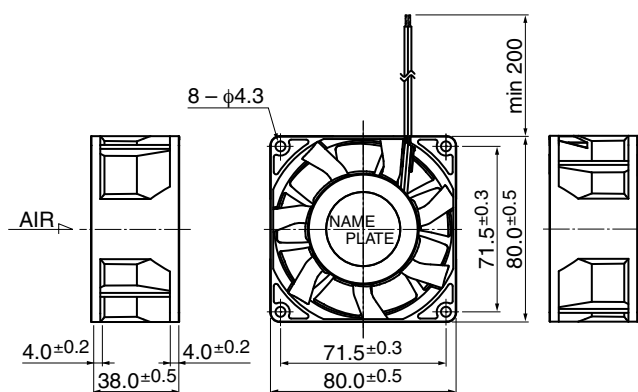


# 08038RA (旧3115RL)

## DC Axial Fan

80<sup>□</sup>X38<sup>L</sup>

### ■ 外観図 Outline



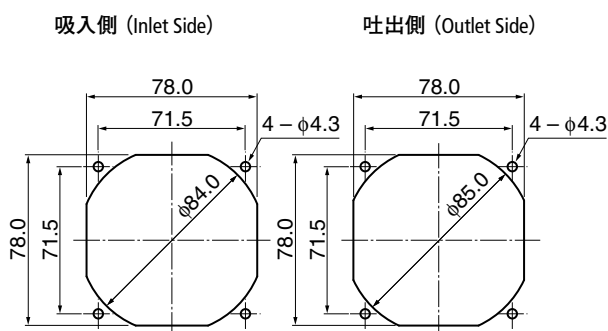
### ■ 一般仕様 General Specifications

モーター保護	: 自動復帰方式、逆接続防止
Motor Protection	: Auto Restart / Polarity Protection
絶縁抵抗	: DC500V メガにて10MΩ以上
Insulation Resistance	: 10MΩ or over with a DC500V Megger
絶縁耐圧	: AC700V 1s
Dielectric Withstand Voltage	
許容環境温度範囲	: -10°C ~ +70°C (Operating)
Allowable Ambient Temperature Range	: -40°C ~ +70°C (Storage)
	: 実用上さしつかえない状態で結露無きこと non-condensing environment

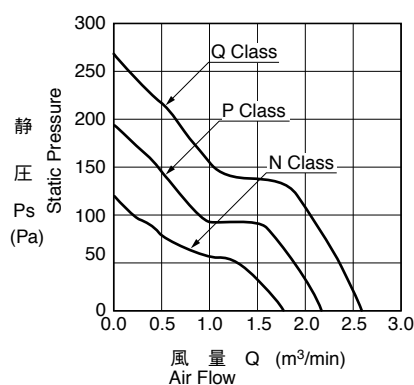
### ■ 期待できる寿命 Expected Life

※故障率 10% (L10 Life)	
※Failure Rate: 10% (L10 Life)	
25°C 100,000 時間 (Hours)	: N, P Class
25°C 80,000 時間 (Hours)	: Q Class

### ■ 取付穴参考図 Panel Out-cuts



### ■ 特性曲線 Characteristic Curves



### ■ 材質 Material

ケーシング	: プラスチック (ブラック) UL94V-0
インペラー	: プラスチック (ブラック) UL94V-0
軸受	: ボールベアリング
リード線	: UL1007 AWG26 +: 赤 -: 黒
Casing	: Plastic (Black) UL94V-0
Impeller	: Plastic (Black) UL94V-0
Bearing	: Ball Bearing
Lead Wire	: UL1007 AWG26 +: Red, -: Black

Customize service for IP compatible type and Oil-proof type is available for this item. Please contact to our sales representative for more detail.

### ■ 仕様 Specifications

Model**	Product Number	Rating Voltage	Operating Voltage	Current	Input Power	Speed	Max Air Flow	Max Static Pressure	Noise	Mass	
		(V)	(V)	(A)*1	(W)*1	(min-1)*1	(m <sup>3</sup> /min)*1 (CFM)*1	(Pa) (In H2O)*1	(dB)*1	(g)	
08038RA-24N-EA-	00	24	14.0 ~ 27.6	0.22	5.28	4500	1.75	61.8	115	0.46	46.0
08038RA-24P-EA-	00			0.40	9.60	5500	2.15	75.9	180	0.72	51.0
08038RA-24Q-EA-	00			0.60	14.40	6500	2.6	91.8	260	1.04	56.0
08038RA-24S-EA-	00		1.20	14.0 ~ 25.2	28.80	8100	3.30	116.5	420.0	1.69	62.0

Rotation: Clockwise as seen from the label side  
Airflow Outlet: Label side

\*1: Average Values in Free Air

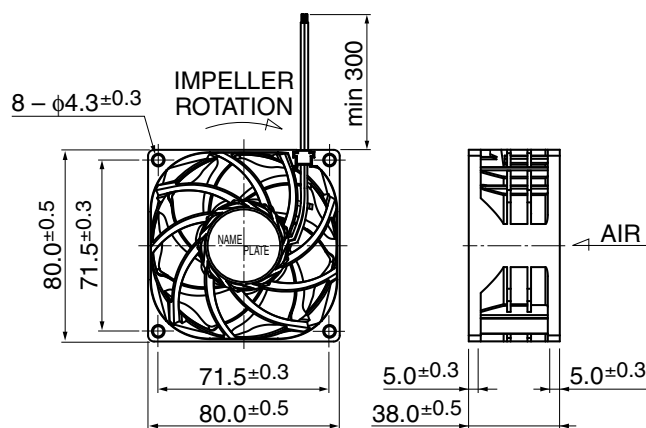
# 08038RA (E-Type)

## DC Axial Fan

80<sup>□</sup>X38<sup>L</sup>



### Outline



### General Specifications

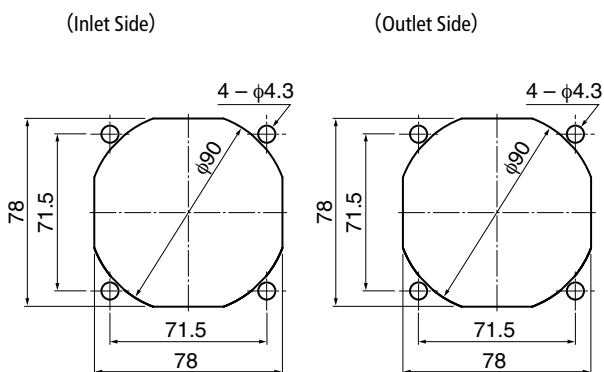
Motor Protection	Auto Restart / Polarity Protection
Insulation Resistance	10M $\Omega$ or over with a DC500V Megger
Dielectric Withstand Voltage	AC700V 1s
Allowable Ambient Temperature Range	- 10°C ~ + 70°C (Operating) - 40°C ~ +70°C (Storage) non-condensing environment

### Expected Life

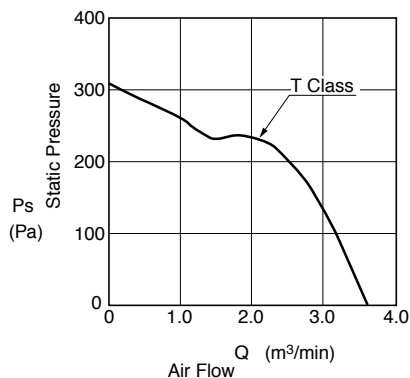
※ Failure Rate: 10% (L10 Life)

40°C 70,000 (Hours)

### Panel Out-cuts



### Characteristic Curves



### Material

Casing	: Plastic (Black) UL94V-0
Impeller	: Plastic (Black) UL94V-0
Bearing	: Ball Bearing
Lead Wire	: UL10368 AWG24 + : Red, - : Black

Variable speed type is also available.  
Please inquire regarding the other requirements.

### Specifications

Model	Product No.	Rating Voltage	Operating Voltage	Current	Input Power	Speed	Max. Air Flow		Max. Static Pressure	Noise	Mass	
		(V)	(V)	(A)*1	(W)*1	(min <sup>-1</sup> )*1	(m <sup>3</sup> /min)*1	(CFM)*1	(Pa)*1	(In H <sub>2</sub> O)*1	(dB)*1	(g)
08038RA-48T-EAE-	00	48	36 ~ 75	0.63	30.2	9500	3.63	128.0	309.5	1.24	63.0	158

Rotation: Clockwise as seen from the label side  
Airflow Outlet: Label side

\*1: Average Values in Free Air

## General Specifications

Motor Type: DC Brushless Motor

Motor Protection: Auto Restart/Polarity Protection

Motor withstands reverse connection for positive and negative leads.

Insulation Resistance:

10M  $\Omega$  or over with a DC500V Megger

Dielectric Withstand Voltage:

AC 700V 1s or 500V 1min

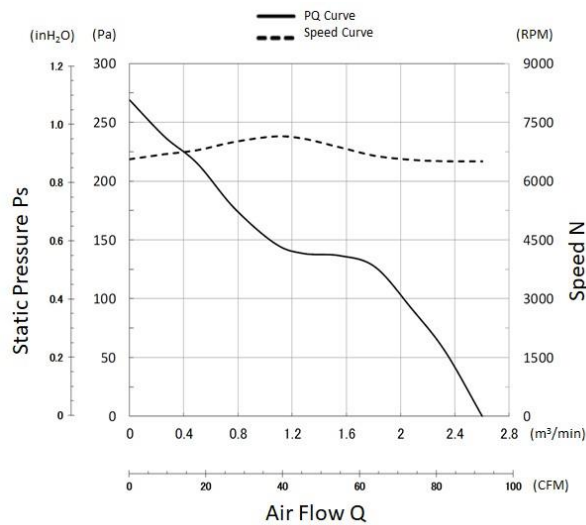
Allowable Ambient Temperature Range:

-10°C ~ +70°C (Operating)

-40°C ~ +70°C (Storage)

(non-condensing environment)

## Characteristics Curves



## PWM Benefits & Applications

### PWM Benefits

- Increased Life Expectancy
- Energy Saving
- Lower Vibration
- Lower Noise
- Current Spike Prevention

### PWM Applications

- Routers
- Switches
- Storage
- Data Centers
- Optical Repeaters
- Broadcast Equipment
- Inverters
- UPS
- Battery Chargers
- Fuel Cells
- Industrial Power Supplies
- Welders
- Plasma Cutters
- Instrumentation
- Test Equipment
- Enclosures and more

- Customized fan performances at multiple operating points.
- Peak efficiency resulting in lower total ownership costs.
- Cost effective and better reliability.

## Life Expectancy L10

25°C 80,000 Hours

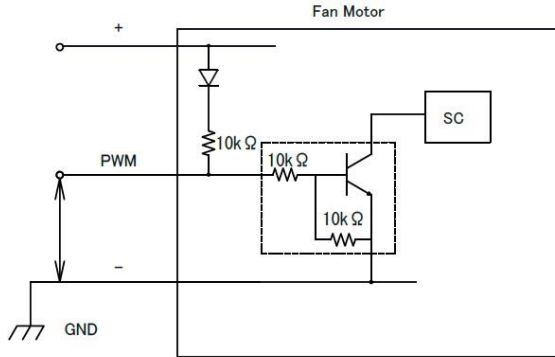
## Specifications

MODEL	Rated Voltage	Operating Voltage	Current		Input Power		Speed	Max. Air Flow		Max. Static Pressure		Noise	Mass
			Avg	Max	Avg	Max		(CFM)	(m³/min)	(inH <sub>2</sub> O)	(Pa)		
	(V)	(V)	(A) <sup>*1</sup>	(A) <sup>*1</sup>	(W) <sup>*1</sup>	(W) <sup>*1</sup>	(min <sup>-1</sup> ) <sup>*1</sup>			(dB) <sup>*1</sup>	(g)		
08038RA-12Q-EU-04	12	7.0 ~13.8	1.15	1.60	13.80	19.20	6500	91.8	2.60	1.04	260	56.0	210

\*1: Values in Free Air

## PWM Specifications

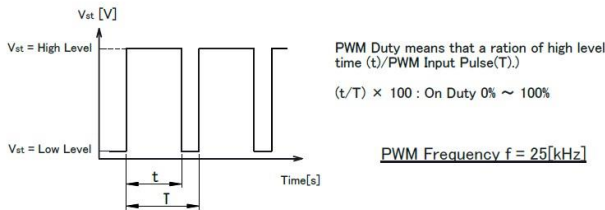
### PWM CONTROL CONNECTION



#### 1. PWM Control

- $V_{st} = \text{Low Level (0V} \sim 0.4\text{V)}$  → Stop (On Duty 0%)
- $V_{st} = \text{High Level}$  → Full Speed (On Duty 100%)
- $V_{st} = \text{Open}$  → Full Speed

#### 2. PWM Duty & PWM Input Pulse



## TACHO Specifications

### TACHO SIGNAL

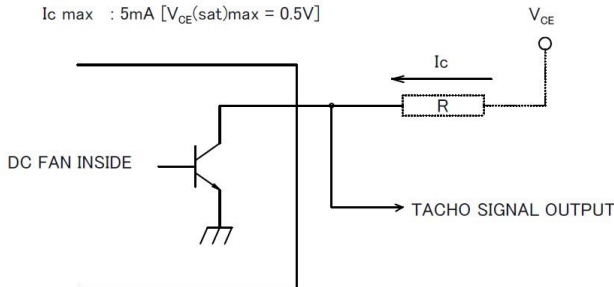
1. OUTPUT CIRCUIT : OPEN COLLECTOR
2. SPECIFICATION

$T_a = 25^\circ\text{C}$

Absolute Maximum Ratings at  $T_a = 25^\circ\text{C}$

$V_{CE \text{ max}} : +15\text{V}$

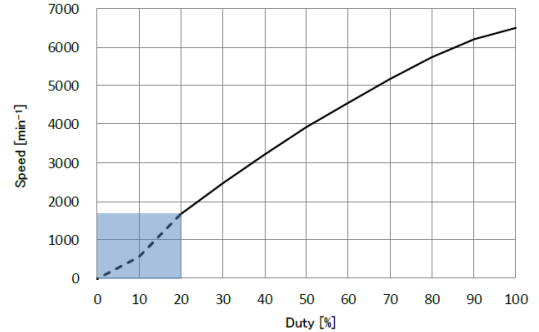
$I_c \text{ max} : 5\text{mA}$  [ $V_{CE(\text{sat})\text{max}} = 0.5\text{V}$ ]



TACHO SIGNAL CIRCUIT

## PWM Characteristics Curve

Reference PWM Duty VS Speed  
Conditions: at rating Voltage,  $V_{st} = 5.0\text{V}$ ,  $f = 25\text{kHz}$ ,  $T_a = 25^\circ\text{C}$



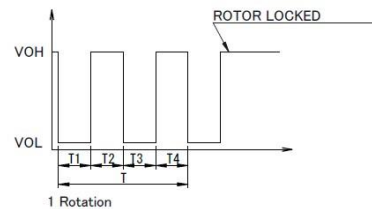
#### 3. The condition for PWM control are as follows.

- When you use this under PWM control, always be sure the motor's operation under practical mounting state. Fan motor may not start up caused by PWM control at very low speed condition.
- To run at Rating Voltage.
- Please use the start with Duty 20% or more at 25kHz. [At rated voltage input, Ambient temperature  $25^\circ\text{C}$ ]

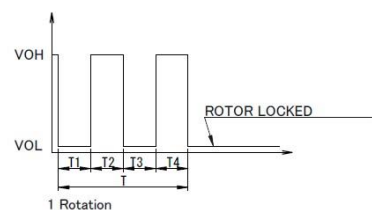
#### 3. OUTPUT WAVEFORM : AT RATED VOLTAGE

##### OUTPUT SIGNAL VOLTAGE

###### 3-1 Case-1



###### 3-2 Case-2



- 1) When the rotor is locked at VOH position of signal, signal keeps VOH position.
- 2) When the rotor is locked at VOL position of signal, signal keeps VOL position.
- 3)  $T = T_1 + T_2 + T_3 + T_4 = 60^\circ / m = 1 \text{ rotation}$

$m : \text{min}^{-1}$

Tach Duty Cycle =  $50\% \pm 10\%$



## General Specifications

### Motor Protection:

Auto Restart/Polarity Protection

### Insulation Resistance:

10M Ω or over with a DC500V Megger

### Dielectric Withstand Voltage: AC 700V 1s

### Allowable Ambient Temperature Range:

N ~ Q Class: -10°C ~ +70°C (Operating)

R Class: -10°C ~ +60°C (Operating)

All Class: -40°C ~ +70°C (Storage)  
(non-condensing environment)

IP Code: IP69K

## Expected Life

N, P Class: 25°C	100,000 Hours (L10)
Q, R Class: 25°C	80,000 Hours (L10)

## Material

Casing : Plastic (Black) UL94V-0

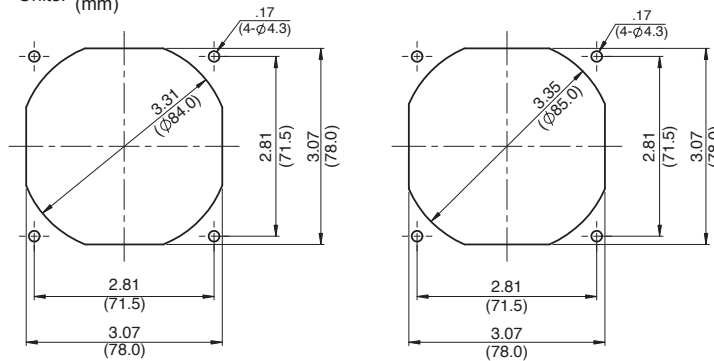
Impeller : Plastic (Black) UL94V-0

Bearing : Ball Bearing

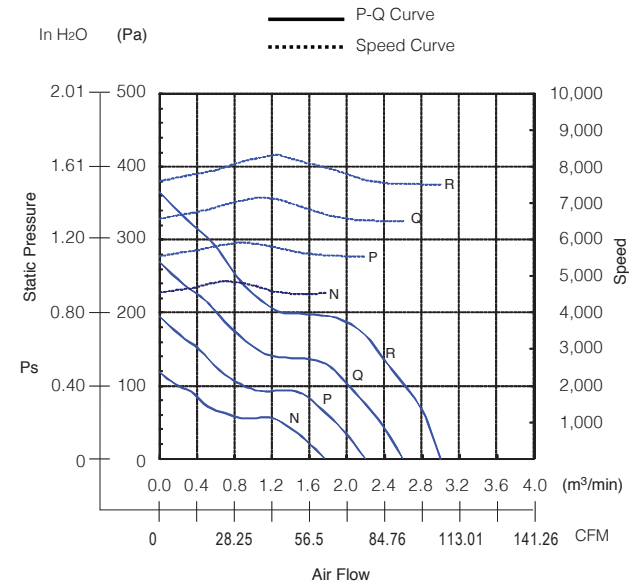
Lead Wire : UL3385, AWG26, +Red, -Black, (tach) White

## Panel Cut-Outs

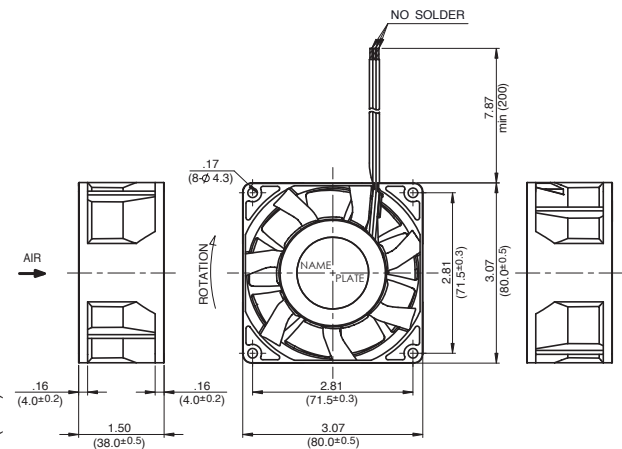
Units:  $\frac{\text{inch}}{\text{mm}}$



## Characteristic Curves



## Outline



## Specifications

MODEL	Rated Voltage	Operating Voltage	Current	Input Power	Speed	Max. Air Flow		Max. Static Pressure		Noise	Mass
	(V)	(V)	(A) <sup>*1</sup>	(W) <sup>*1</sup>	(min <sup>-1</sup> ) <sup>*1</sup>	CFM <sup>*1</sup>	(m <sup>3</sup> /min) <sup>*1</sup>	in H <sub>2</sub> O	(Pa) <sup>*1</sup>	(dB) <sup>*1</sup>	(g)
08038RA-24N-GA-00	24	14.0 ~ 27.6	0.22	5.28	4500	61.80	1.75	0.46	115.0	46.0	240
08038RA-24P-GA-00	24	14.0 ~ 27.6	0.40	9.60	5500	75.93	2.15	0.72	180.0	51.0	240
08038RA-24Q-GA-00	24	14.0 ~ 27.6	0.60	14.40	6500	91.82	2.60	1.04	260.0	56.0	240
08038RA-24R-GA-00	24	14.0 ~ 26.4	0.87	20.88	7500	105.94	3.00	1.43	355.0	59.5	240

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[08038RA-12Q-EA-00](#) [08038RA-12Q-ET-00](#) [08038RA-12P-EL-00](#) [08038RA-12N-ET-00](#) [08038RA-12P-ET-00](#)  
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