

PLATINUM THIN FILM RTD ELEMENT: VEC-1632-100

1.

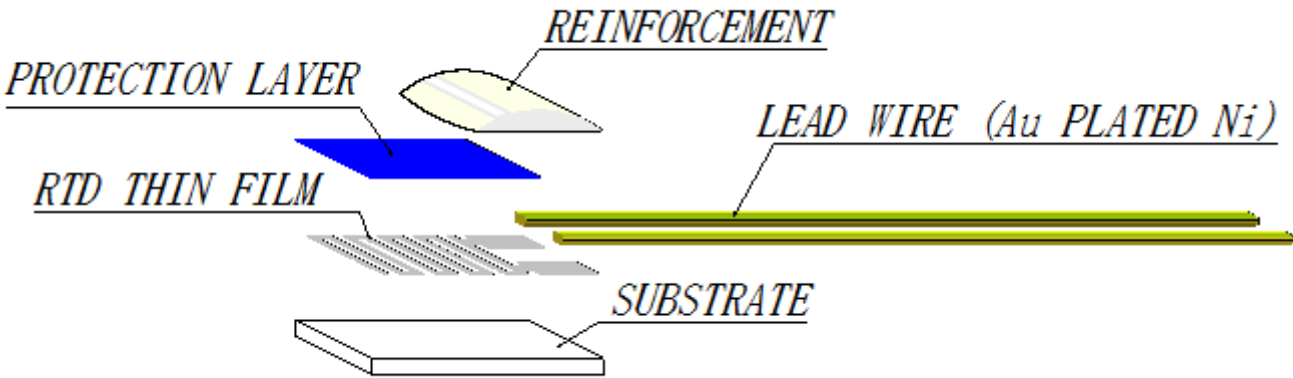
All of elements are provided after inspected the actual resistance value at 0℃
That is a great advantage for making sensors if customers need similar or the same resistance value.
每个产品都标明了在 0℃的阻值，方便客户分类、挑选、使用。
2.

This thin film RTD element is small, so it can be fitted in a small diameter tube.
该薄膜铂电阻体积非常小。
3.

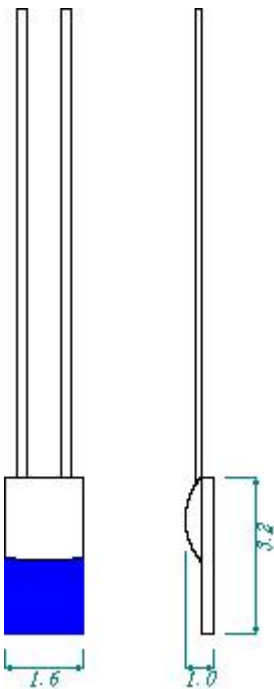
Outstanding vibration and shock resistibility is improved comparing with wire wound types by circuit-sputter technology.
抗震动冲击能力强
4.

The stability is excellent at even high temperature due to the construction.
高温稳定性好
5.

10 pieces of thin film RTD elements are in a bag. (20 pieces for class 2B)
最小包装 10/包 （ 2B 精度的 20/包） 每个包装袋均标明阻值



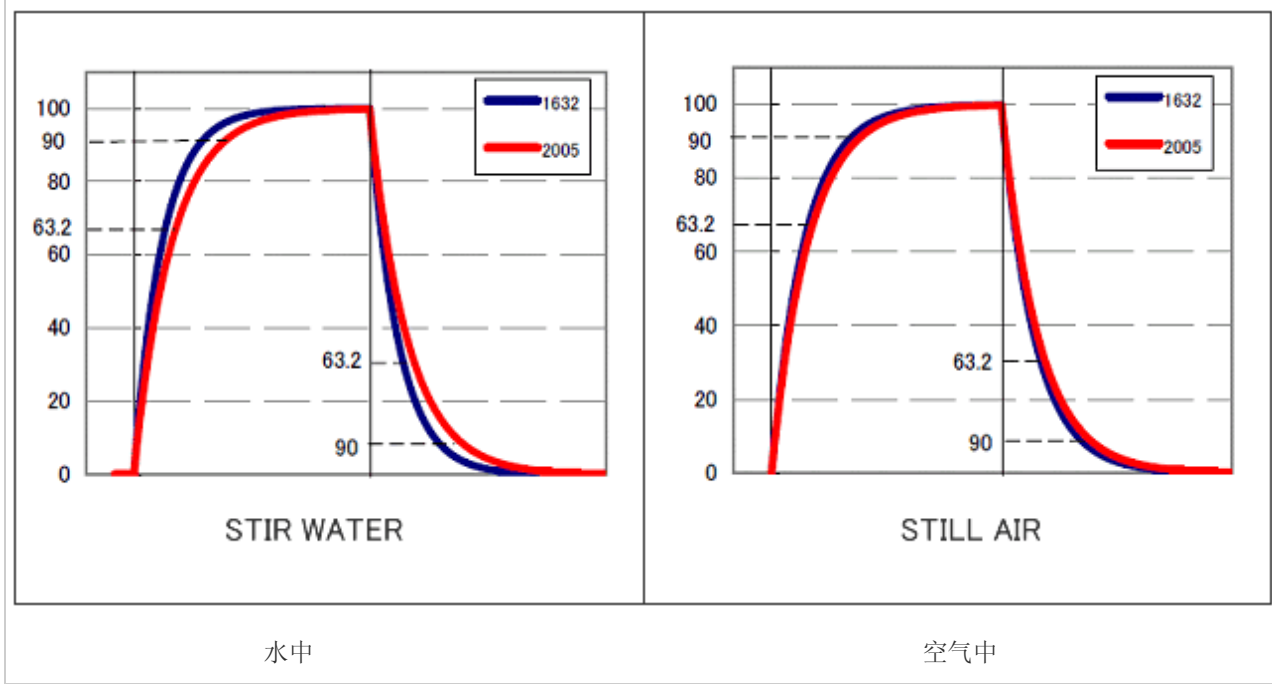
PRODUCT CODE 型号	VEC-1632-100		
CLASS 精度分级	1/3B, A, B, 2B		
	1/3B (±0.1℃)	-70 to 500℃ (-20 to 250℃范围内保证精度)	
	A (±0.15℃)	-70 to 500℃ (-40 to 400℃范围内保证精度)	
	B (±0.30℃)	-70 to 500℃	
	2B (±0.60℃)	-70 to 500℃	
TEMP. RANGE 测温范围			

<div>DIMENSION(mm) (WxLxH)</div> <div>尺寸（宽 x 长 x 高）</div> <div>RESISTANCE VALUE</div> <div>电阻值</div> <div>MEASUREMENT CURRENT</div> <div>工作电流</div> <div>LEAD WIRE'S MATERIAL</div> <div>引线材料</div> <div>LEAD WIRE'S DIMENSION (mm)</div> <div>(WxLxH)</div> <div>引线尺寸</div> <div>TEMPERATURE COEFFICIENT</div> <div>RESISTANCE (TCR)</div> <div>温度系数（TCR）</div> <div>STABILITY</div> <div>稳定性</div>	1.6x3.2x1.0 mm			
	100 Ω 在 0℃时			
	≤ 1 mA			
	Au-Plated Nickel （镍镀金）			
	0.25x0.15x12 mm			
	0.003851			
	200℃, 1000 hour	ΔR0 < ±0.02%		
	400℃, 1000 hour	ΔR0 < ±0.04%		
RESPONSE TIME				
AIR（空气）				
(90% RESPONSE)	V=1.0 m/s		V=3.0 m/s	WATER（水）
	10	7	0.3	
90%响应时间				
SELF HEATING				
自热	Still Air without MgO	-	0.10	0.49
	空气中			
	With MgO Powder	-	0	0.08
氧化镁填充保护管中				
*2mA for Pt100 Ω is out of standard				

TECHNICAL DATA- RESPONSE TIME 反应时间

PLATINUM THIN FILM RTD ELEMENT

Response time to 63.2% (time constant) and 90% of temperature shift in stir water and still air when temperature shift from T1 to T2 is 100% is as follow.



TYPE	SIZE	STIR WATER		STILL AIR	
		63.2%	90%	63.2%	90%
PLATINUM THIN FILM RTD ELEMENT	1632	0.3	0.7	4.3	9.9
	2005	0.4	0.9	4.8	11.1

TEST CONDITION

TYPE OF ELEMENT	THIN FILM RTD ELEMENT
TEST TEMP.	T1:LOW TEMP. →T2:HIGH TEMP. T2:HIGH TEMP. →T1:LOW TEMP.

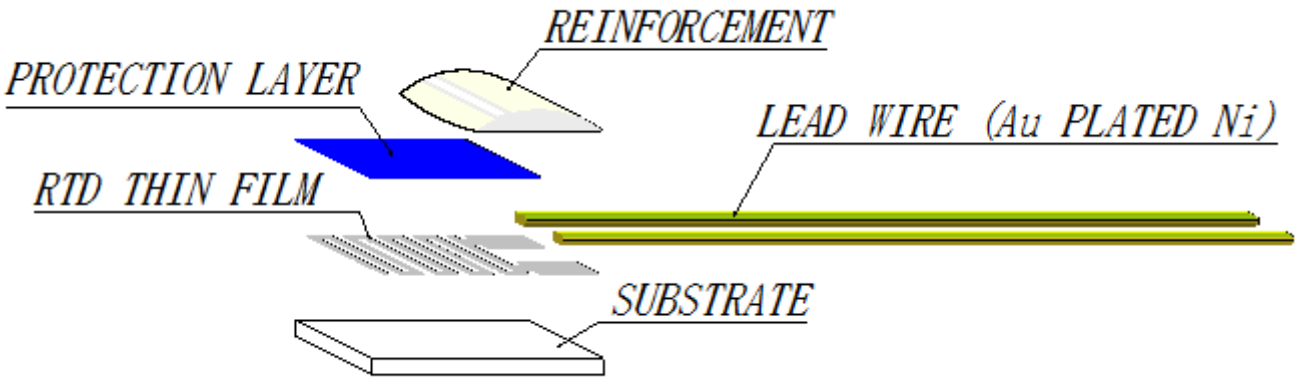
TEST METHOD	The product's measuring point is set in room temperature. Then, the response time is measured at time constant and 90% of response time after it is put in stir water and still air that have enough temperature difference with room temperature, instantly. Response time is an average of $T1 \rightarrow T2$ and $T2 \rightarrow T1$.
	STANDARD JIS C1604 RTD

Notification

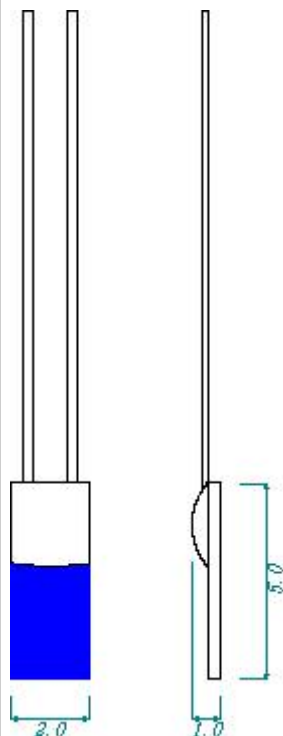
This data is measured in a specified environment.
By the actual measuring environment, and condition, the result will be different.

PLATINUM THIN FILM RTD ELEMENT: VEC-2005-100

1. All of elements are provided after inspected the actual resistance value at 0℃
That is a great advantage for making sensors if customers need similar or the same resistance value.
每个产品都标明了在 0℃的阻值，方便客户分类、挑选、使用。
2. This thin film RTD element is small, so it can be fitted in a small diameter tube.
该薄膜铂电阻体积非常小。
3. Outstanding vibration and shock resistibility is improved comparing with wire wound types by circuit-sputter technology.
抗震动冲击能力强
4. The stability is excellent at even high temperature due to the construction.
高温稳定性好
5. 10 pieces of thin film RTD elements are in a bag. (20 pieces for class 2B)
最小包装 10/包 （ 2B 精度的 20/包） 每个包装袋均标明阻值



PRODUCT CODE 型号	VEC-2005-100		
CLASS 精度分级	1/3B, A, B, 2B		
TEMP. RANGE 测温范围	1/3B (±0.1℃)	-70 to 500℃ (-20 to 250℃ 范围内保证精度)	
	A (±0.15℃)	-70 to 500℃ (-40 to 400℃ 范围内保证精度)	
	B (±0.30℃)	-70 to 500℃	
	2B (±0.60℃)	-70 to 500℃	

<div>DIMENSION(mm) (WxLxH)</div> <div>尺寸（宽 x 长 x 高）</div> <div>RESISTANCE VALUE</div> <div>电阻值</div> <div>MEASUREMENT CURRENT</div> <div>工作电流</div> <div>LEAD WIRE'S MATERIAL</div> <div>引线材料</div>	2.0x5.0x1.0 mm		
	100 Ω 在 0℃时		
	≤ 2 mA		
	Au-Plated Nickel （镍镀金）		
	0.25x0.15x12 mm		
<div>LEAD WIRE'S DIMENSION (mm)</div> <div>(WxLxH)</div> <div>引线尺寸</div> <div>TEMPERATURE COEFFICIENT</div> <div>RESISTANCE (TCR)</div> <div>温度系数（TCR）</div>	0.003851		
	200℃, 1000 hour	ΔR0 < ±0.02%	
	400℃, 1000 hour	ΔR0 < ±0.04%	

RESPOSE TIME				AIR（空气）	
(90% RESPONSE)	V=1.0 m/s		V=3.0 m/s		WATER（水）
	90%响应时间				
	16		11		0.3

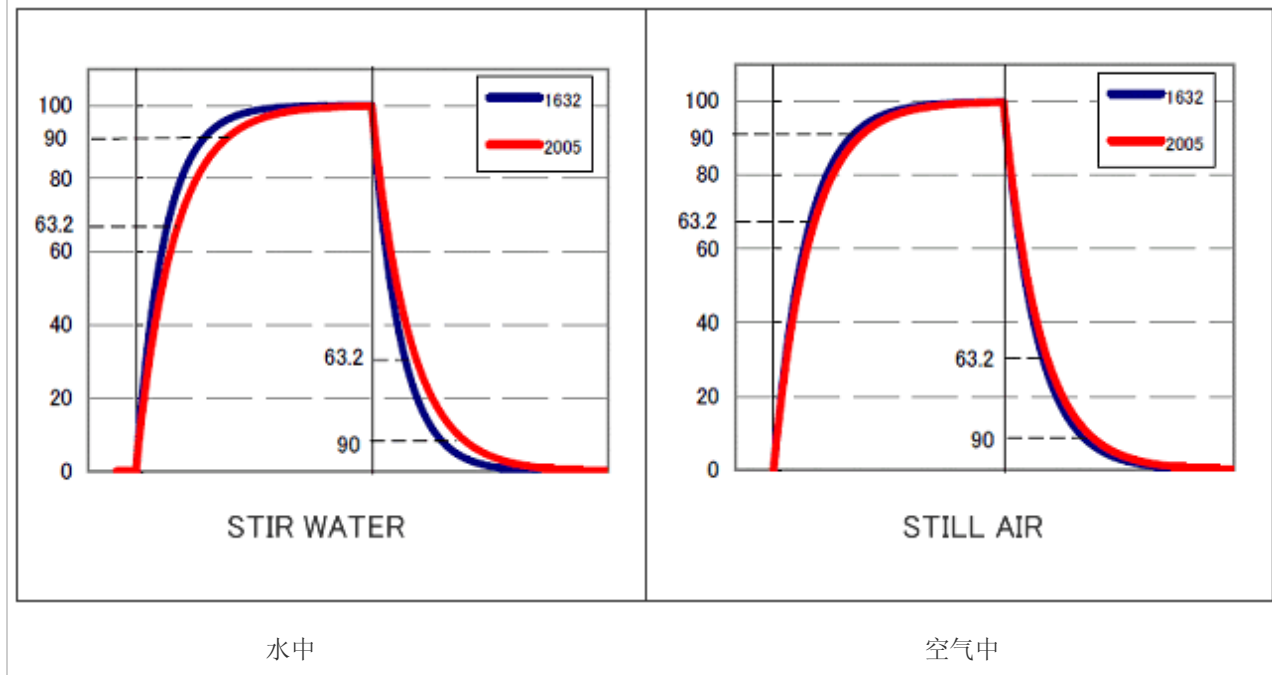
SELF HEATING	Condition	Self-Heating(℃)			
		Condition			
		0.5mA	1mA	(2mA)*	
		Still Air without MgO	-	0.08	0.47
		空气中			
With MgO Powder	-	0	0.07		
氧化镁填充保护管中					

*2mA for Pt100 Ω is out of standard

TECHNICAL DATA- RESPONSE TIME 反应时间

PLATINUM THIN FILM RTD ELEMENT

Response time to 63.2% (time constant) and 90% of temperature shift in stir water and still air when temperature shift from T1 to T2 is 100% is as follow.



TYPE	SIZE	STIR WATER		STILL AIR	
		63.2%	90%	63.2%	90%
PLATINUM THIN FILM RTD ELEMENT	1632	0.3	0.7	4.3	9.9
	2005	0.4	0.9	4.8	11.1

TEST CONDITION

TYPE OF ELEMENT	THIN FILM RTD ELEMENT
TEST TEMP.	T1:LOW TEMP. →T2:HIGH TEMP. T2:HIGH TEMP. →T1:LOW TEMP.

<p>TEST METHOD</p>	<p>The product's measuring point is set in room temperature.</p> <p>Then, the response time is measured at time constant and 90% of response time after it is put in stir water and still air that have enough temperature difference with room temperature, instantly.</p> <p>Response time is an average of $T1 \rightarrow T2$ and $T2 \rightarrow T1$.</p>
<p>STANDARD</p>	<p>JIS C1604 RTD</p>

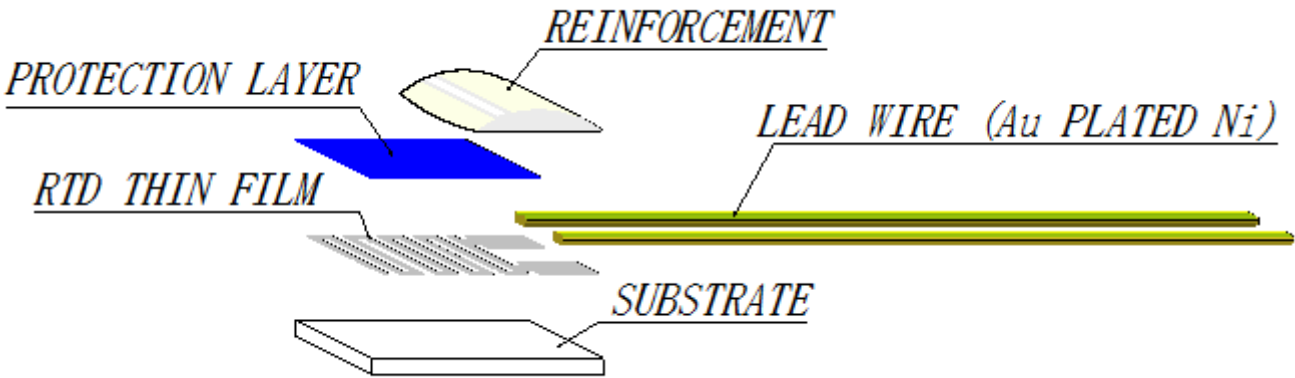
Notification

This data is measured in a specified environment.

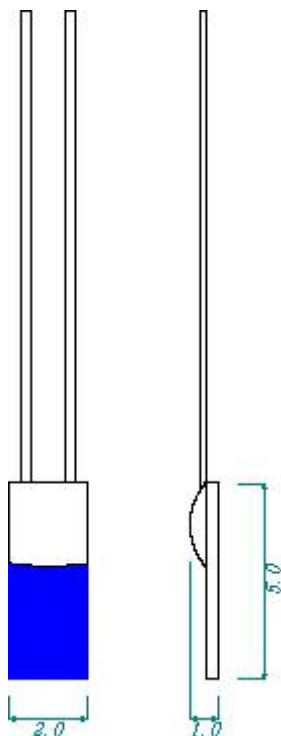
By the actual measuring environment, and condition, the result will be different.

PLATINUM THIN FILM RTD ELEMENT: VEC-2005-1000

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该薄膜铂电阻体积非常小。
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抗震动冲击能力强
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高温稳定性好
5. 10 pieces of thin film RTD elements are in a bag. (20 pieces for class 2B)
最小包装 10/包 （ 2B 精度的 20/包） 每个包装袋均标明阻值



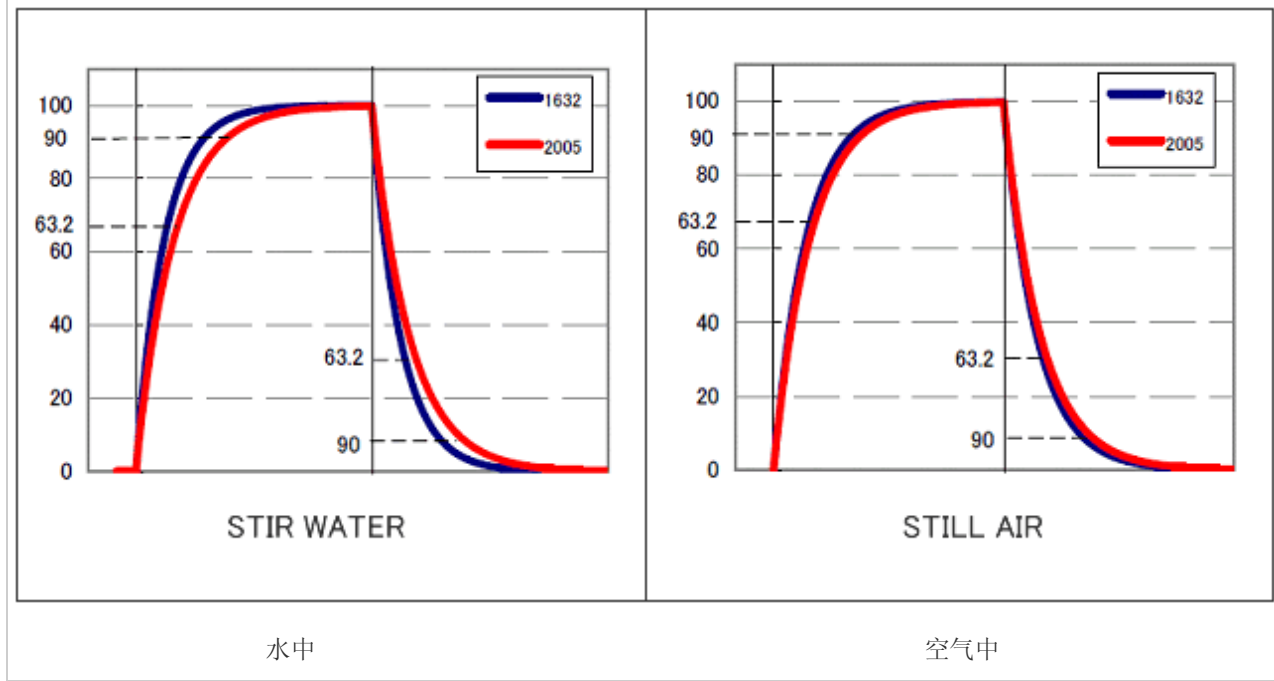
PRODUCT CODE 型号	VEC-2005-1000		<div>RoHS Compliant</div>
CLASS 精度分级	1/3B, A, B, 2B		
TEMP. RANGE 测温范围	1/3B (±0.1℃)	-70 to 500℃ (-20 to 250℃ 范围内保证精度)	
	A (±0.15℃)	-70 to 500℃ (-40 to 400℃ 范围内保证精度)	
	B (±0.30℃)	-70 to 500℃	
	2B (±0.60℃)	-70 to 500℃	

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	1000Ω 在 0℃时			
	≤ 0.5 mA			
	Au-Plated Nickel （镍镀金）			
	0.25x0.15x12 mm			
	0.003851			
	200℃, 1000 hour	ΔR0 < ±0.02%		
	400℃, 1000 hour	ΔR0 < ±0.04%		
RESPONSE TIME				
AIR（空气）				
(90% RESPONSE)	V=1.0 m/s		V=3.0 m/s	WATER（水）
	16	11	0.3	
90%响应时间				
16				
11				
0.3				
SELF HEATING				
自热				
Condition		Self-Heating(℃)		
		0.5mA	1mA*	(2mA)*
Still Air without MgO		0.23	1.08	4.46
空气中				
With MgO Powder		0	0.14	0.71
氧化镁填充保护管中				
*1mA and 2mA for Pt1000Ω is out of standard				

TECHNICAL DATA- RESPONSE TIME 反应时间

PLATINUM THIN FILM RTD ELEMENT

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	2005	0.4	0.9	4.8	11.1

TEST CONDITION

TYPE OF ELEMENT	THIN FILM RTD ELEMENT
TEST TEMP.	T1:LOW TEMP. →T2:HIGH TEMP. T2:HIGH TEMP. →T1:LOW TEMP.

TEST METHOD	The product's measuring point is set in room temperature. Then, the response time is measured at time constant and 90% of response time after it is put in stir water and still air that have enough temperature difference with room temperature, instantly. Response time is an average of $T1 \rightarrow T2$ and $T2 \rightarrow T1$.
	STANDARD JIS C1604 RTD

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