



# Class 20 / 40 micro-ICR RF board

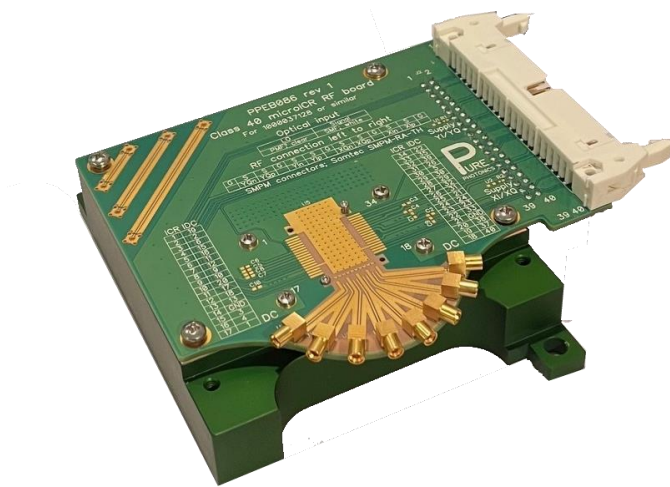
PPEB086 - Datasheet

The **Pure Photonics** PPEB086 solution accepts a MSA formfactor micro-ICR (either soldered in place or installed with a mounting bracket). It provides separate pinout for DC signals (40 pin IDC) and for RF signals (8 SMPM connectors).

The PPEB086 is fully passive and designed as an interface between the optical component (with the RF connections) and the control board.

The PPEB086 is a replacement of the Lumentum parts 1000035397 and 1000033129 (micro-ICR daughterboards) and fits with the legacy Lumentum motherboard (1000033134) and with the PPEB076 micro-ICR control board.

Snapshot
<p>Mounting board for micro-ICR</p> <p>Class 20 and 40 capable</p> <p>Option for soldering and mounting bracket</p>



PPEB086 – prelim; class 40 design has perpendicular SMPM connectors

## 1. Table of Contents

1. Table of Contents .....	2
2. Specifications.....	3
Absolute Maximum Ratings .....	3
Performance Specifications .....	3
3. Mechanical Specification .....	4
4. Pinout .....	5
IDC connector.....	5
ICR .....	5
5. Compliance.....	6
European Union RoHS Compliance .....	6
Hazardous Substance Statement (China RoHS) .....	6
6. Ordering and Technical Support.....	7

## 2. Specifications

### Absolute Maximum Ratings

In

Current (any pin)	A	0	0.5
		With micro-ICR installed the device specifications apply	

Table 1 the absolute maximum ratings for the product are listed. These settings are never to be exceeded and may result in critical damage to the product if applied.

Parameter	Unit	Min	Max
Operating temperature	°C	10	40
Storage temperature	°C	5	45
Humidity	%DH	5	60
Voltage (any pin)	V	0	10
		With micro-ICR installed the device specifications apply	
Current (any pin)	A	0	0.5
		With micro-ICR installed the device specifications apply	

Table 1: Absolute maximum ratings

### Performance Specifications

In Table 2 the more general performance specifications of the product are listed

Parameter	Unit	Min	Typ	Max
RF-trace 3-dB bandwidth (each trace,class 20)	GHz	25		
RF-trace 3-dB bandwidth (each trace,class 40)	GHz	40		

Table 2: performance specifications

### 3. Mechanical Specification

Parameter	Unit	Min	Typ	Max
Connector 40 pin IDC - side		Amphenol 71922-140LF		
Connector 40 pin IDC - bottom		Samtec CES-120-01-L-D		
Connector RF (class 20)		Samtec SMPM-PF-P-xx-RA-TH		
Connector RF (class 40)		Samtec SMPM-PF-P-xx-ST-SM		
ICR type		OIF MSA micro-ICR		
Threads to install PPEB076 board		M3		
Threads to install micro-ICR		M1.2		

Table 3: mechanical configuration

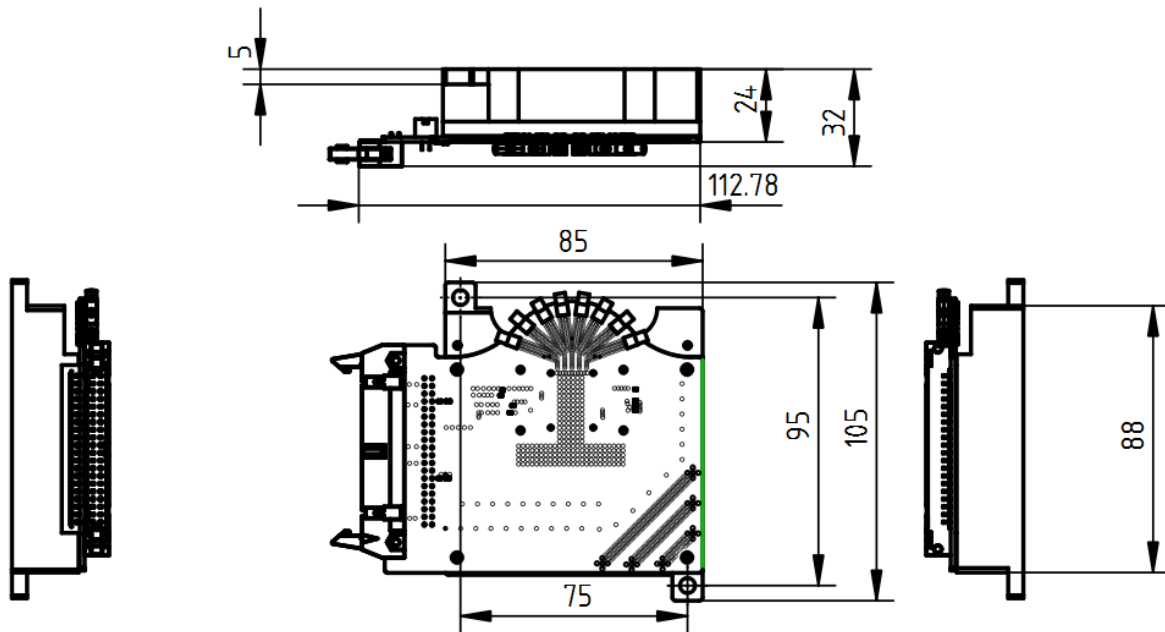


Figure 1: PPEB086

## 4. Pinout

### IDC connector

IDC pin	ICR pin	Typ. function	IDC pin	ICR pin	Typ. function
1	17	Peak YQ	2	2	TMON
3	15	Output Adjust YQ	4	16	Gain YQ
5	30	VOA2	6	3	MGCAGC Y
7			8		GND
9	8	PD YQ p	10	9	PD YQ n
11	6	PD YI p	12	7	PD YI n
13	13	Vamp YI	14		GND
15	4	PD Cathode	16	5	PD Anode
17	11	Gain YI	18	12	Output Adjust YI
19	1	Shutdown Y	20	10	Peak YI
21	25	Peak XQ	22	34	LKPD-XQ
23	23	Output Adjust XQ	24	24	Gain XQ
25			26	31	VOA1
27		GND	28		
29	28	PD XQ p	30	29	PD XQ n
31	26	PD XI p	32	27	PD XI n
33	22	Vamp XI	34		GND
35	33	VOA GND	36		
37	19	Gain XI	38	20	Output Adjust XI
39	32	Shutdown X	40	18	Peak XI

Table 4: pinout for IDC connector

### ICR

ICR pin	Function	ICR pin	Function
1	Shutdown Y	34	unused
2	unused	33	VOA GND
3	MGCAGC Y	32	Shutdown X
4	PD Cathode	31	VOA1
5	PD Anode	30	VOA2
6	PD YI p	29	PD XQ n
7	PD YI n	28	PD XQ p
8	PD YQ p	27	PD XI n
9	PD YQ n	26	PD XI p
10	Peak YI	25	Peak XQ
11	Gain YI	24	Gain XQ
12	Output Adjust YI	23	Output Adjust XQ
13	VAMP YI	22	YAMP XI
14	GND	21	GND
15	Output Adjust YQ	20	Output Adjust XI
16	Gain YQ	19	Gain XI
17	Peak YQ	18	Peak XI


Table 5: pinout for ICR

## 5. Compliance

### European Union RoHS Compliance

This product complies with the European Union directive for Restrictions of Hazardous Substances (RoHS) – Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, Directive 2002/95/EC plus all amendments.

### Hazardous Substance Statement (China RoHS)

部件名称 (Parts)	有毒有害物质或元素 (Hazardous Substance)					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
集成光电器件 Integrated optical circuit board assembly	x	o	o	o	o	o
金属盒件 Metal enclosure	o	o	o	o	o	o
<p>o : 表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T 11363-2006标准规定的限量要求以下。</p> <p>o : Indicates that this hazardous substance contained in all homogeneous materials of this part is below the limit requirement in SJ/T 11363-2006.</p> <p>x : 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006标准规定的限量要求。</p> <p>x : Indicates that this hazardous substance contained in at least one of the homogeneous materials of this part is above the limit requirement in SJ/T 11363-2006.</p> <p>对销售之日的所售产品, 本表显示我公司供应链的电子信息产品可能包含这些物质。注意: 在所售产品中可能会也可能不会含有所有所列的部件。</p> <p>This table shows where these substances may be found in the supply chain of our electronic information products, as of the date of sale of the enclosed product. Note that some of the component types listed above may or may not be a part of the enclosed product.</p>						
 <p>除非另外特别的标注, 此标志为针对所涉及产品的环保使用期限标志。此环保使用期限只适用于产品在产品手册中所规定的条件下工作。</p> <p>The Environment-Friendly Use Period (EFUP) for all enclosed products and their parts are per the symbol shown here, unless otherwise marked. The Environment-Friendly Use Period is valid only when the product is operated under the conditions defined in the product manual.</p>						

## 6. Ordering and Technical Support

Please contact the **Pure Photonics** team for further information and support, as well as quotations.

The different product configurations available:

- PPEB086-20-ICR Class 20 with micro-ICR (not included) installed/soldered
- PPEB086-20 Class 20 with mounting clamp
- PPEB086-40-ICR Class 40 with micro-ICR (not included) installed/soldered
- PPEB086-40 Class 40 with mounting clamp

Our contact information:

Tel: (510) 497 0815

Email: [support@pure-photonics.com](mailto:support@pure-photonics.com)

Web: [www.pure-photonics.com](http://www.pure-photonics.com)