



To: University of Liverpool  
 For the attention of: [Ilya Tsurin](#)  
 Your ref: Quotation for prototype circuit

Lead times in working days.  
 Note lead time may improve  
 subject to material availability.

Description	Our Code	Qty Unit	Price each	Mat'l	Prod'n	Total	QTA
PixFlex_RD53_2JAE	2677-22	5 PCB	£219.54	In stock	40	40	No
PixFlex_RD53_2JAE	2677-22	10 PCB	£109.77	In stock	40	40	No
PixFlex_RD53_2JAE	2677-22	15 PCB	£73.18	In stock	40	40	No
PixFlex_RD53_2JAE	2677-22	20 PCB	£54.88	In stock	40	40	No
Tooling			£450.00				

**Notes:**

Costed to be supplied in your 1-up array.

Material is available at time of quotation. Should you wish to secure this material ahead of the purchase order, then please issue an intent-to-purchase.

Your internal contact is Hayley Knight-Heath, email [HKnight-Heath@graphic.plc.uk](mailto:HKnight-Heath@graphic.plc.uk)

Your external contact is Eric Leckie, email [eleckie@graphic.plc.uk](mailto:eleckie@graphic.plc.uk)

This quotation was prepared by Victoria Daw, email [vdaw@graphic.plc.uk](mailto:vdaw@graphic.plc.uk)

**\*\*\*\*QUOTE NOTES\*\*\*\***

**Please note qty 5, 10 and 15 do not hit minimum line value. Please note you are able to order qty 5, 10 and/or 15 for the same price as 20 but line order minimum must be met.**

**Please note that we are quoting with 18um base copper and will be plating upto 35um minimum in accordance with IPC-6013 Table 3-19. Please confirm if this is acceptable prior to order placement.**

**Please note that we are quoting with Green ImageFlex on both sides in order to ease manufacture, please confirm if this is acceptable prior to order placement.**

**This part will be deemed as budgetary due to missing drawing documents, this quote will need validating on receipt of these relevant documents.**

**Please note one PCB represents 3 different designs all incorporated in one data pack.**

**Conditions of quotation:**

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\* Prices quoted are based on the information available at the time of enquiry. We therefore reserve the right to  
 \* amend the quotation upon receipt of electronic manufacturing data, or in the light of changes to costs which  
 \* are beyond our control.

\* A full Design Rule Check will be carried out at time of order placement and may affect the contents of this  
 \* quotation.

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- The manufacturing period commences upon receipt and approval of the electronic manufacturing data and receipt of the material.



- Delivery is quoted in working days and is only valid for the next working day, after which capacity may not be available.
- Prices quoted are valid for 30 days and are exclusive of VAT.
- Graphic plc reserves the right to amend pricing, including on live orders, in response to changes in international duty tariffs, where any additional duty charges come under Graphic's responsibility.
- This quotation is subject to Graphic's standard terms and conditions (available on request) and no other terms apply unless agreed in writing by Graphic plc.
- We will ship the ordered goods using our preferred freight forwarder unless instructed otherwise. Appropriate costs for this will be added at the time of invoice. These prices are available on request.
- Prices quoted on this document do not include any costs for AS9102 FAIR / ISIR reports. If you state a requirement for this on your PO or any associated specifications at the time of order, a charge will apply.
- Prices are quoted in Sterling
- For deliveries of 7 working days or less, order confirmation, data and receipt of material are required before 9am on day 1. For deliveries greater than 7 working days, order confirmation, data and receipt of material are required before 11am on day 1.
- ITAR regulations stipulate that customers must inform their suppliers if their products are subject to ITAR regulations. If no mention of the ITAR regulations is made on the quote request or the order then Graphic PLC will assume that the ITAR regulations do not apply.
- Indirect isolation and continuity testing by signature comparison will be performed. As per IPC-9252 table 4.1 test level C, the customer agrees that this is acceptable.
- Payment terms: 30 days end of month

## Product specification

**Part No: PixFlex\_RD53\_2JAE**

**Graphic Product Reference: 2677-22**

Release: None / Manufacture: Not Defined

Circuit size : 178.00mm x 48.00mm

1 circuit per 184 x 60 array; 6 array's per 457 x 305 panel

Required thickness = 0.200 +0.050 -0.050 mm

Finish: Electroless Nickel Immersion Gold

No gold edge contacts

ET points: top 400 ; bottom 400

### Construction:

(1-2) AP8545R/0.100/018018

### Drilling:

<i>Construction</i>	<i>Finished Dia (mm)</i>	<i>Quantity</i>	<i>Plated</i>	<i>Other features</i>
1-2	0.20	729	True	
1-2	1.10	23	False	
1-2	2.00	2	False	
1-2	3.00	6	False	

### Notes:

- Unless previously agreed please note that we are unable to complete an in-depth 'Design For Manufacture' review. This review will automatically take place upon receipt of an order for this part.
- Unless there are express instructions to the contrary, Graphic plc will modify solder mask artworks to ensure no tenting of holes occurs.
- Any solderpaste data required should be requested at time of order; otherwise a charge of £100 will be made.
- Design advice is given in good faith and without prejudice. Graphic and its Applications team cannot be held responsible for any product failure, or if systems do not perform as expected.
- Unless there are express instructions to the contrary, Graphic plc will remove or replace selective non-functional pads from the design.
- Measurements will be made in SI ( metric ) units as per IPC-6012 section 1.6 and IPC-6013 section 1.6. This may mean converting non-SI units to metric.
- REACH: The printed circuit boards supplied by Graphic plc are classed as articles and contain no substances listed by the European Chemical Agency as Substances of Very High Concern.
- This product will be compliant with the European Council Directive 2002/95/EC, Restriction of Hazardous Substances.
- Not all of the dielectric materials used in this product have been tested for compatibility with all lead-free assembly processes by Graphic PLC. Check with the material supplier for specific compatibility data.