



# Beyonics iPark Campus, Malaysia

Beyonics iPark in Malaysia manufactures precision-engineered components with extensive expertise in tool design & fabraction, plastic injection molding, aluminium die casting, precision machining, polymer compounding, PCBA, product assembly and associated value adding processes.

Beyonics iPark specializes in providing customized technical solutions by working together with its customers to analyse product design, offer material and manufacturing solutions, and implement optimized production and supply chain programs to fulfill customers' specific needs.







## **Manufacturing Capabilities & Services**

## **Tool Design & Fabrication**

- Fully integrated 3D software for mould design: Unigraphics
- Advanced CAD/CAM software: SolidWorks, AutoCAD, DraftSight, ZWCAD, Master CAM
- Product and mould design capabilities
- CNC EDM (electric discharge machining), CNC high speed milling, wire-cut and grinding
- Multi-cavitation design and tooling up to 8 cavities

## **Aluminum Die Casting**

- Alloys: ADC12, A380, A383.1, ADC10, LM6, A413, A360 and other special composition alloys upon request
- Die casting machines (125 to 850 tons)
- Casting wall thickness at 1.0mm (0.040"); Tolerance ± 0.125mm (0.005") – as per NADCA standard
- Smelting furnaces & holding furnaces
- · Auto deburring machine
- Tumbling bowls & shot blast hangars

## **Washing Facility**

 Aqueous cleaning line that meets VDA 19.2 meeting particle requirements of 100µm cleanliness levels

## **Precision CNC machining**

- Machining tolerance ± 0.025mm (0.001"); Hole diameter machined tolerance up to 0.009mm (0.00035")
- Roughness of Ra0.6 for sealing surface, Fit 6 tolerance for shafts and holes, and roundness up to 4μm
- CNC milling machines
- Lathe

## **Plastics Injection Molding**

- Plastics injection machines (20 to 850 tons)
- Horizontal, Vertical, 2K injection moulding

## **Polymer Compounding**

- Extrusion machines with full range of accessories; cutter, vibrator, horizontal mixer, vertical mixer
- Single screw & Twin screw machines

#### **Clean Room Assembly**

- Class 1000 Room
- Class 100 laminar flow hood
- Form-in-place (FIP) gasket for leak proofing or EMI shielding

#### **Powder Coating**

 Complete with automatic line & oven

#### **Box Build Assembly**

- Box build assembly lines
- Configure and build to order fulfilment service
- System build test
- Online process traceability and shopfloor control system

#### **Electronics Assembly**

- Surface mount technology, up to 0105 chip size capability
- 3D Auto Solder paste inspection (SPI)
- 2D Auto inspection (AOI)
- Wave solder
- Manual and auto-soldering
- PCB router
- In-Circuit testing (HP3070)
- Flying probe testing (Takaya)
- Conformal coating (PVA)
- X-Ray (Dage)
- PCBA functional testing
- Radio frequency manufacturing and test
- Online Component traceability

#### Lab

- Liquid particle counter (LPC)
- Fourier-transform Infra-red (FTIR)
- Ion chromatography (IC)
- Gas chromatography mass spectrometry (GCMS)
- Non-volatile residue test
- Surface energy



## **Manufacturing Capabilities & Services**

## **Engineering Services**

- · Early design improvements and reviews for sustainable manufacturing
- Full DFM (Design for Manufacturability) review support and VAVE (Value Analysis/Value Engineering)

## **Traceability**

- · Laser marked data matrix
- Label printing

## Inspection

- CMM
- Spectrometer
- X-Ray CT Scanner
- · Surface roughness tester
- FTIR spectrophotometer
- · Melt flow index machine
- · Instron machine
- Impact tester
- Contracer
- Smartscope
- · Leak testing

## **Industries**



Automotive



**Industrial Automation** 



Technology



Healthcare & Medical



Communication

## **Certifications**

ISO 9001: 2015 ISO 13485: 2016 ISO 14001: 2015 IATF 16949: 2016 ISO45001:2018

**C-TPAT Compliance** 

Compliance to VDA6.3 Requirement

## **Beyonics iPark Campus**

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Beyonics is headquartered in Singapore and provides Advanced Precision Engineering and Manufacturing Solutions for the Healthcare, Automotive and Technology sectors.

Our in-house capabilities, ranging from engineering and design (material & process), tooling, automation, complex and precision components manufacturing (plastics & metals), to end product assembly, enable Beyonics to provide a full suite of services to meet customers' high value and complex manufacturing needs with extensive automation and zero defect test solutions.



