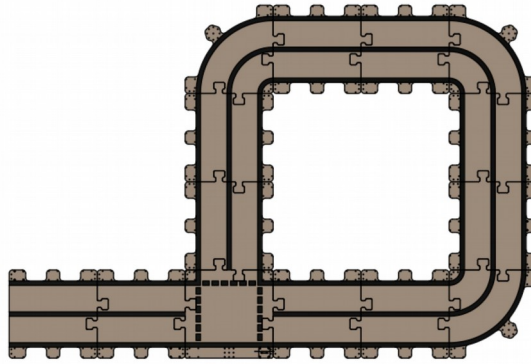# Measures and tracks elements

The track is made of two different blocks

- **Lane**: Area delimited by three black lines, two signalling the edges and a central one.
- **Straight segment**: Segment with no curvature
- **Curved segment**: Piece of the track with a 90-degree turn
- **Intersection**: Area without a line to be followed. It contains a +/- 90deg turn to either side or a forward path.
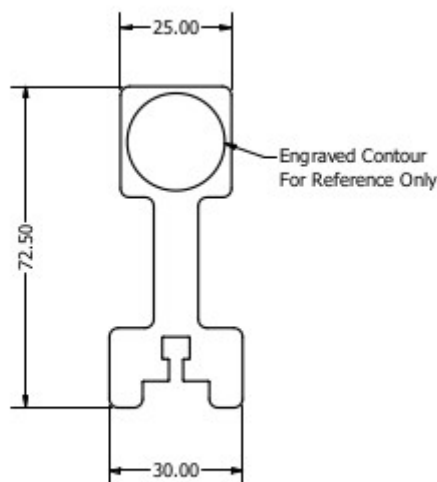

Sample track

Traffic Signs based on the standard UK traffic sign models:

- **Go ahead, Turn Left, Turn Right**: Expected behaviour is to pick a new direction in the current intersection.
- **Stop**: It represents the end of the track, and the robot should stop moving
- **Give way**: It represents a temporal stop; the robot should stop briefly and then continue the movement.
- **Men at Work**: The robot should reduce its pace.

The physical specifications of the traffic signs are the following:

Traffic Lights Connection guide
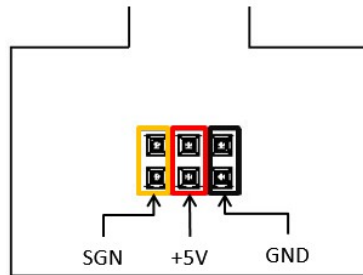
Traffic Light Pinout

Figure 5:
Connection
Pins

5V and GND can be obtained from any power source in the board. The signal SGN is send through IO5 (see Pinout traffic light)

Challenge description

You will have to present your solution to a committee of judges, experts in the field. Your agent must navigate an unknown combination of the items presented in this document. In case of conflict, there are two hierarchies to apply:

1. Traffic lights > Traffic signs
2. Proximity of the traffic sign

Rules

- Each team will be equipped with one robot and a complete description of the elements in the final challenge. The hardware needs to be returned by the end of the competition.

- Feel free to use any library or third-party software in the design of your application but keep in mind that your project needs to be developed during the hackathon. Any suspicion of plagiarism or the use of software developed after the submission or before the hackathon starting date will lead to your disqualification

- During the project assessment, an unknown environment will be presented containing the elements given to the participants on the first day, and their application is expected to navigate it autonomously.

- If you want to apply for prizes you'll need to submit your code online before the end of the competition. This will ensure that the assessment is fair and that no major changes can be performed after the deadline.

- When assessing the results of the challenge, Judges will consider performance, tools used and clarity of the presentation.

- During the closing ceremony the winners will be announced, and prizes will be awarded.

- The organisation reserves the right to modify these rules if necessary.