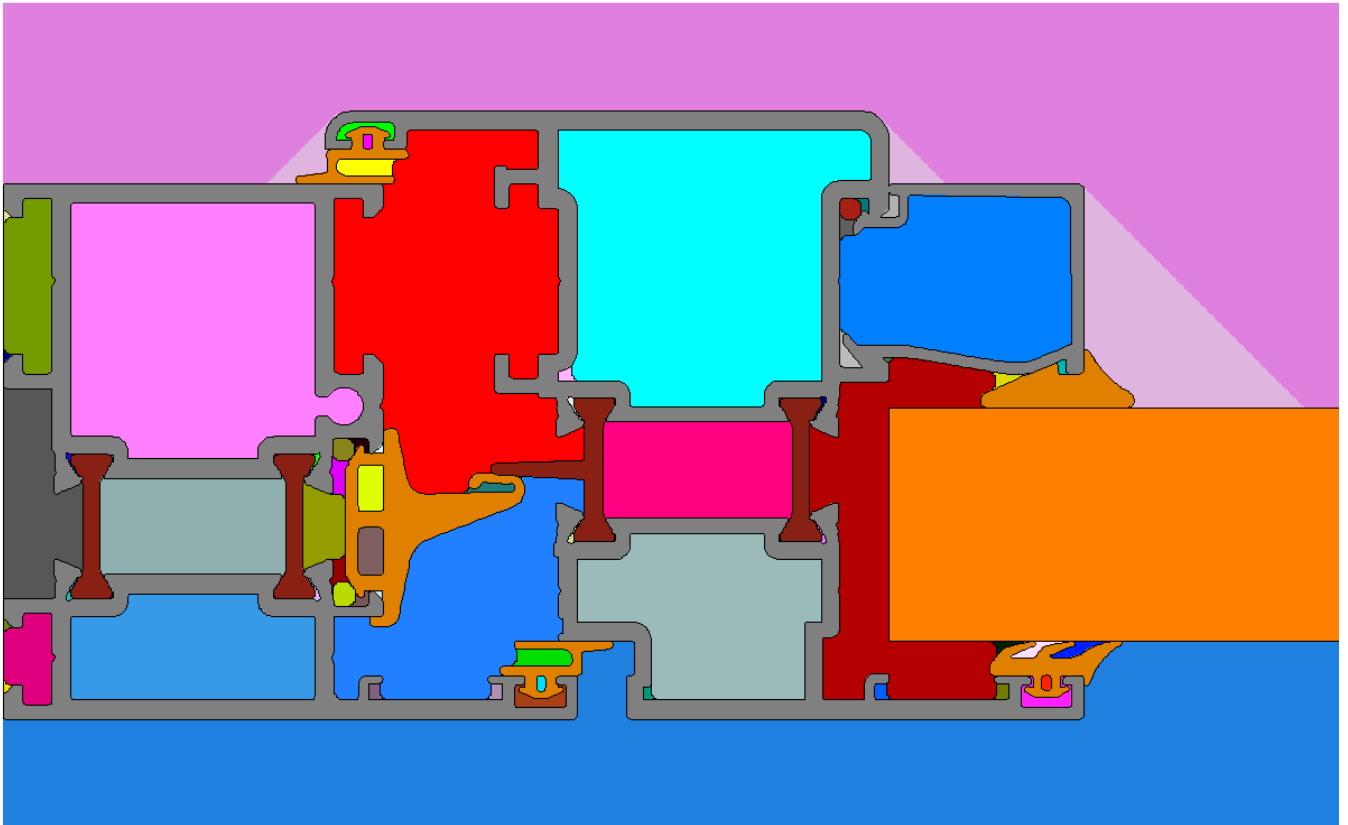**GRAPHICS**



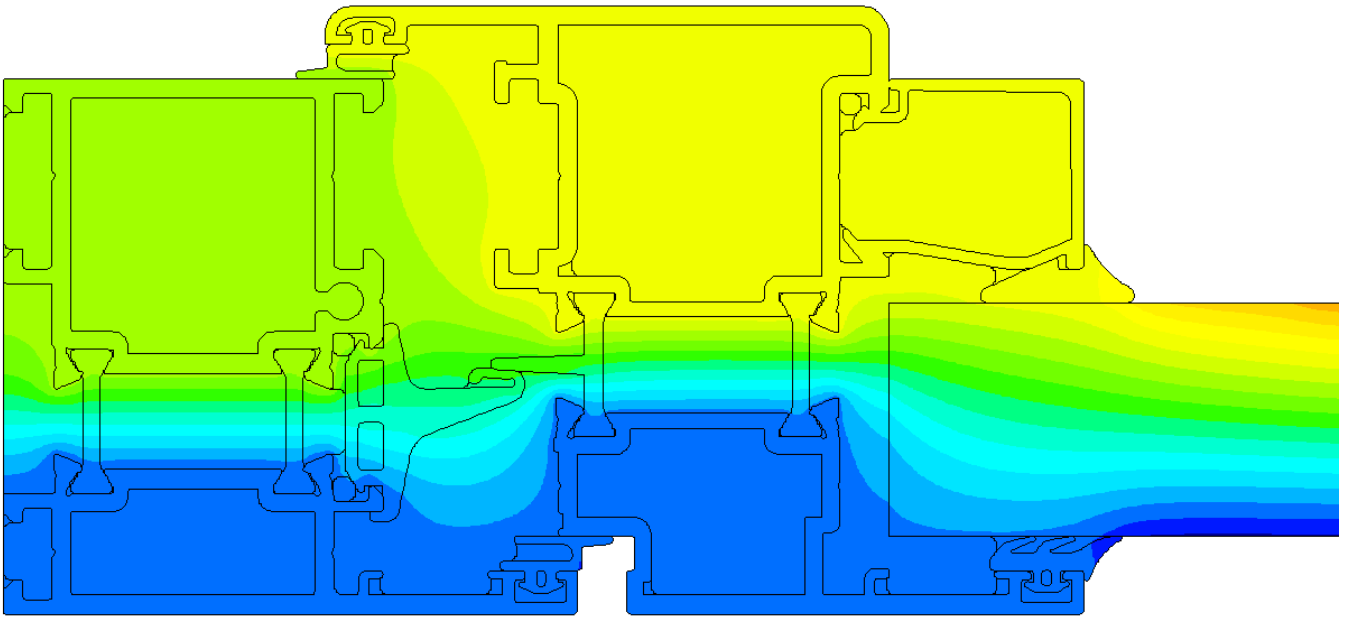Figure 1. Frame section (with colour numbers)

**GRAPHICS**

Figure 2.  Isotherms (colour increment of 1°C, line increments of 1°C and 5°C)
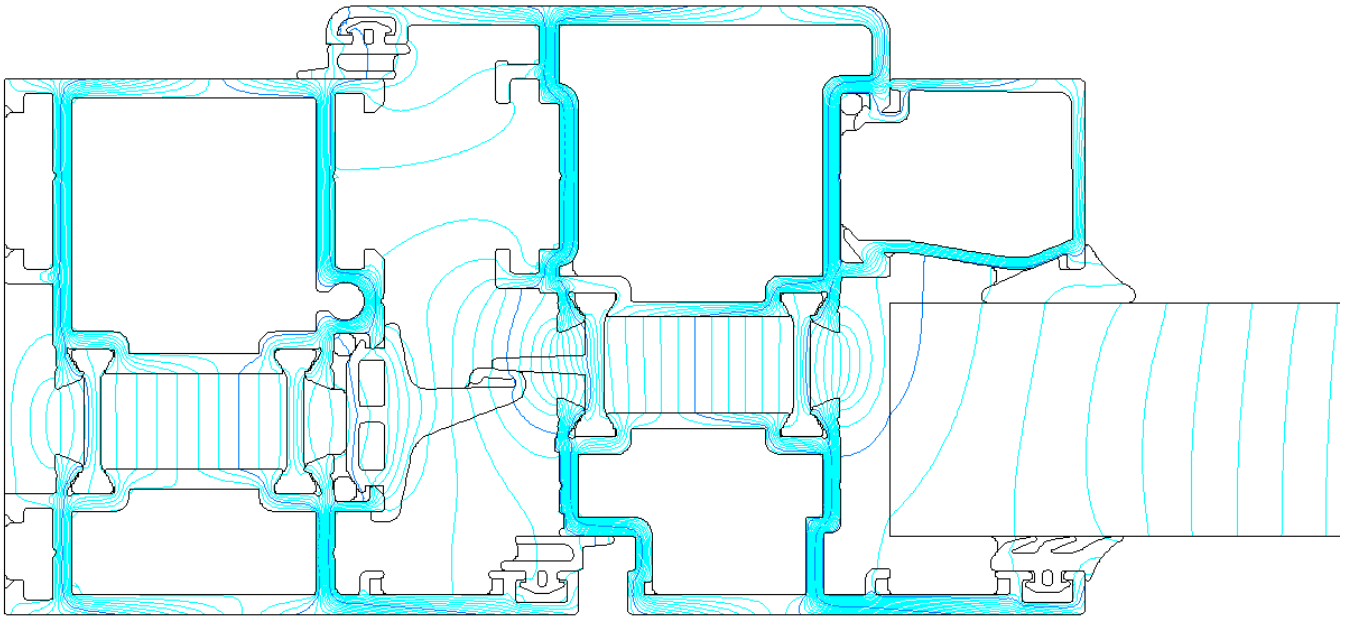
Figure 3.  Heat flow lines (increment 0.1 W/m).

## BISCO DATA SUMMARY

| | |
|---|---|
| BISCO data file name | **bisco_temp.tif.bsc** |
| Bitmap file name | **bisco_temp.tif.bmp** |
| Pixel width | **0.0001 m** |
| Triangulation size | **5 pixels** |
| Number of nodes | **51675** |

Material thermal conductivity table

| Col. | Name | lambda [W/mK] | eps [-] |
|---|---|---|---|
| 8 | aluminium | 160.000 | |
| 28 | insulation | 0.035 | |
| 44 | polyamid reinf. | 0.300 | |
| 60 | EPDM | 0.250 | |

Boundary condition table

| Col. | Name | t [-C] | h [W/m²K] | q [W/m²] |
|---|---|---|---|---|
| 170 | exterior | 0.0 | 25.00 | 0 |
| 174 | interior (normal) | 20.0 | 7.70 | 0 |
| 182 | interior (reduced) | 20.0 | 5.00 | 0 |

Cavity equivalent thermal conductivity table

| Col. | lambda [W/mK] | Col. | lambda [W/mK] | Col. | lambda [W/mK] | Col. | lambda [W/mK] |
|---|---|---|---|---|---|---|---|
| 3 | 0.030 | 4 | 0.124 | 5 | 0.104 | 6 | 0.029 |
| 7 | 0.031 | 9 | 0.029 | 10 | 0.077 | 11 | 0.065 |
| 12 | 0.031 | 13 | 0.028 | 14 | 0.098 | 15 | 0.028 |
| 16 | 0.029 | 17 | 0.032 | 18 | 0.028 | 19 | 0.026 |
| 20 | 0.098 | 21 | 0.028 | 22 | 0.029 | 23 | 0.029 |
| 24 | 0.073 | 25 | 0.027 | 26 | 0.027 | 27 | 0.026 |
| 29 | 0.026 | 30 | 0.058 | 31 | 0.031 | 32 | 0.029 |
| 33 | 0.027 | 34 | 0.027 | 35 | 0.027 | 36 | 0.026 |
| 37 | 0.026 | 38 | 0.030 | 39 | 0.037 | 40 | 0.026 |
| 41 | 0.058 | 42 | 0.074 | 43 | 0.045 | 45 | 0.028 |
| 46 | 0.027 | 47 | 0.027 | 48 | 0.037 | 49 | 0.069 |
| 50 | 0.026 | 51 | 0.026 | 52 | 0.029 | 53 | 0.027 |
| 54 | 0.027 | 55 | 0.031 | 56 | 0.028 | 57 | 0.027 |
| 58 | 0.026 | 59 | 0.026 | 61 | 0.058 | 62 | 0.046 |
| 63 | 0.027 | 64 | 0.028 | 65 | 0.028 | 66 | 0.029 |
| 67 | 0.031 | 68 | 0.028 | 69 | 0.029 | 70 | 0.034 |
| 71 | 0.027 | 72 | 0.029 | 73 | 0.029 | 74 | 0.029 |
| 75 | 0.029 | 76 | 0.031 | 77 | 0.028 | | |

## BISCO MAIN RESULTS

| | |
|---|---|
| U-value of frame | **3.542 W/(m².K)** |
| Width of frame | **0.1107 m** |
| U-value of panel 1 | **1.173 W/(m².K)** |
| Width of panel 1 | **0.1900 m** |

Frame thermal transmittance calculation table
```
Thermal transmittance of frame (EN 10077-2)
Uf = (Q/(ti-te) - Up1*wp1 - Up2*wp2) / wf = 3.542 W/(m².K)
  Q = 12.297 W/m
  ti = 20.00°C
  te = 0.00°C
  Up1 = 1.173 W/(m².K)   (right edge of bitmap)
  wp1 = 0.1900 m         (distance no. 2)
  Up2 = 0.000 W/(m².K)
  wp2 = 0.0000 m
  wf = 0.1107 m          (distance no. 1)
```