RayBlock™ 105

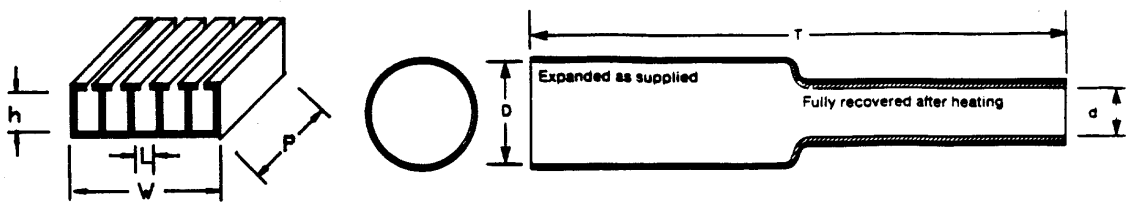

Table 1: Profile Dimensions

Size	No. of Channels	h (nominal)		L (nominal)		W (nominal)		P (nominal)	
		in.	*mm.*	in.	*mm.*	in.	*mm.*	in.	*mm.*
Kit 0102-A0	2	.256	*6.5*	.108	*2.75*	.335	*8.50*	.315	*8*
Kit 0103-A0	3	.256	*6.5*	.108	*2.75*	.482	*12.25*	.315	*8*
Kit 0504-A0	4	.256	*6.5*	.108	*2.75*	.630	*16.0*	.315	*8*
Kit 0105-A0	5	.256	*6.5*	.108	*2.75*	.778	*19.75*	.315	*8*
Kit 0107-A0	7	.256	*6.5*	.108	*2.75*	1.07	*27.25*	.315	*8*
Kit 0110-A0	10	.256	*6.5*	.108	*2.75*	1.52	*38.50*	.472	*12*

Table 2: Tubing Dimensions

Size	No. of Channels	D (minimum)		d (maximum)		T (nominal)	
		in.	*mm.*	in.	*mm.*	in.	*mm.*
Kit 0102-A0	2	.472	*12.0*	.118	*3.0*	1.57	*40*
Kit 0103-A0	3	.630	*16.0*	.158	*4.0*	1.57	*40*
Kit 0504-A0	4	.630	*16.0*	.158	*4.0*	1.77	*45*
Kit 0105-A0	5	.945	*24.0*	.236	*6.0*	1.77	*45*
Kit 0107-A0	7	.945	*24.0*	.236	*6.0*	2.56	*65*
Kit 0110-A0	10	1.26	*32.0*	.315	*8.0*	2.56	*65*

Specification Control Drawing

tyco Electronics	Tyco Electronics Corporation 300 Constitutional Drive Menlo Park, CA 94025 USA	Raychem	Title: RayBlock™ 105
Tyco Electronics reserves the right to amend this drawing at any time. Users should evaluate the suitability of the product for their application		Document No :	RayBlock 105

Cage Code:	Scale:	Size:	Rev. Date:	Rev.:	Sheet:
06090	None	A	30-Oct-96	C	1 of 3

Table 3: Properties:

Property	Unit	Requirement	Test Method
Dimensions	inches	Tables 1 and 2	ASTM D 2671
Initial Pressure Test	---	No bubbles	NOTE 1
Heat Aging 168 hours at 155°C Followed by:	---	---	NOTE 2
Pressure Test	---	No bubbles	
Low Temperature Impact, -40°C 2.2 lb., 12 in. radius tup, 4 in. height Followed by:	---	---	NOTE 3
Pressure Test	---	No bubbles	
Fluid Resistance 1 hour at 23°C in the following fluids: Gasoline Windshield Washer Fluid Followed by:	---	---	NOTE 4
Pressure Test	---	No bubbles	
Fluid Resistance 1 hour at 50°C in the following fluids: Diesel Fuel Brake Fluid, SAE J1703 Engine Oil, SAE 10W40 Power Steering Fluid Automatic Transmission Fluid Engine Coolant GUNK Engine Cleaner Followed by:	---	---	NOTE 4
Pressure Test	---	No bubbles	
Sequential Testing Thermal Shock, -40°C to 120°C, 25 cycles Mechanical Vibration, 24 hours/1 axis Temperature Humidity Cycling, 5 cycles Followed by:	---	---	NOTE 5
Pressure Test	---	No bubbles	

Material: Tubing: The tubing shall consist of a jacket, fabricated from radiation crosslinked modified polyolefin, and a hot melt adhesive liner.

Profile: The profile shall be fabricated from a hot melt adhesive.

Color: The tubing shall be black with an amber adhesive liner. The profile shall be amber.

Qualification : Qualification of RayBlock 105 Kit 0110-A0 qualifies all kits.

Acceptance Tests: Dimensions

This product when installed in accordance with the RayBlock 105 Installation Guidelines shall be suitable for use as a fluid block in cable bundles as described herein.

Note 1: Pressure Test

Prepare 3 test assemblies, in accordance with the RayBlock 105 Installation Guidelines, using cross-linked polyethylene wires about 12 inches long. After sufficient cooling time, shrink one end of a 12-inch piece of Raychem TAT tubing around one end of the installed RayBlock Tubing. Shrink the other end of the TAT around a pressurized air supply fitting. Apply a pressure of 7.5 psi for 1 minute while submersing the assembly under water. After the required time, bubbles of air emerging from the end of the RayBlock Tubing shall constitute a failure. Bubbles emerging from the ends of the wires shall not constitute a failure.

Note 2: Heat Aging

Prepare assemblies in accordance with Note 1, and hold in air circulating oven for the required time. After allowing the assemblies to cool to room temperature for 2 hours, perform the pressure test in accordance with Note 1.

Note 3: Low Temperature Impact

Prepare 3 test assemblies, in accordance with Note 1. Center each test assembly under a falling weight impact tester located in a -40°C cold chamber. Drop a cylindrically shaped 2.2 pound weight, with a radius of 12 inches, on the face impacting the assembly, from a height of 4 inches.

Note 4: Fluid Resistance

Prepare assemblies in accordance with Note 1. Immerse samples in the indicated fluids for the prescribed time and temperature. Remove assemblies from the fluids. After allowing the assemblies to cool to room temperature for 2 hours, perform the pressure test in accordance with Note 1.

Note 5: Sequential Testing

Thermal Shock

Prepare 3 test assemblies, in accordance with Note 1 and subject them to 25 thermal cycles as follows:

30 minutes at -40°C
30 minutes at 120°C
5 minutes maximum between temperatures

Mechanical Vibration

Attach the assemblies to a suitable vibrator and vibrate for a minimum of 24 hours in a simple harmonic motion having an amplitude of 0.03 inch (0.06 inches total excursion) the frequency being varied uniformly between the limits of 10 and 55 hertz (hz) reference: MIL-STD-202, Method 201A. The axis of vibration shall be perpendicular to the axis of the assembly. Assemblies are to be clamped 3 to 4 inches away from the end of the tubing on both sides of the blocked wire bundle.

Temperature Humidity Cycling

Subject the assemblies to the following cycle five (5) times:

1) 95% relative humidity at 40 ± 3°C for 16 hours (hang assembly vertically)
2) -40 ± 3°C for 3 hours
3) 105 ± 3°C for 3 hours (hang assembly vertically)
4) 23 ± 3°C for 2 hours