

CellCube® Culture Module

The CellCube Module is an integrally encapsulated, sterile, single-use device, and is 100% pressure-hold tested before shipment (Figures 10 and 11). It is comprised of a series of parallel culture plates joined to create thin, sealed, laminar flow spaces between adjacent plates. Each culture plate receives proprietary tissue culture treatment prior to assembly to ensure dense, uniform cell growth.

The encapsulation and end plates are made from polycarbonate for strength and long term reliability. The outlet port is located on the upper rear of the CellCube module, diagonally opposite the inlet port. The outlet port interconnects all the parallel laminar flow spaces of the module. Each port (inlet and outlet) is supplied with a 25 cm (10") length of $\frac{1}{2}$ " ID x $\frac{3}{4}$ " OD silicone tubing that terminates in a sterile wrap (only for Cat. No. 3201, 3202, 3264). Even distribution of medium to each of the channels between the plates is provided by the Flow Control Orifices (Figure 12) through a 25 cm (10") length $\frac{1}{2}$ " ID x $\frac{3}{4}$ " OD silicon tubing located at the lower front of the module.

The CellCube module is available in three basic sizes (Table 1). The 25-Layer module is comprised of 25 culture plates, while the 100-Layer module (Figure 13) is made up of four 25-Layer modules in parallel. External clip arrangements on all four corners of the 100-Layer modules ensure that the assembly runs intact and provides a robust leak-proof environment for operation. All individual CellCube modules are separately



Figure 10. CellCube Culture Module 25-Layer (Corning Cat. No. 3101)

leak tested prior to assembly and then further tested after combined assembly of the 100-Layer module. Each lot is tested on surface treatment and sterility, what is gamma radiated. The surface treatment and sterility of each lot is tested after gamma irradiation. Dye injection studies showing typical fluid flow distribution are shown on page 5 (Figures 14-18).

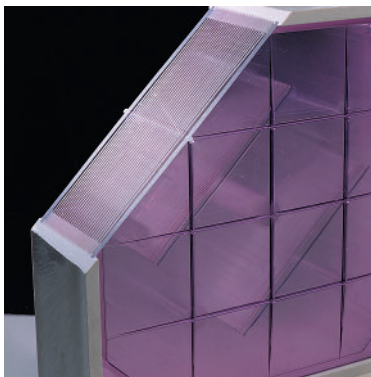


Figure 11. CellCube Culture Module with corner removed to display culture plates.



Figure 12. Flow Control Orifices

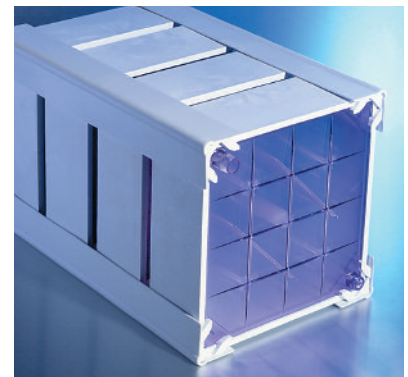


Figure 13. CellCube Culture Module 100-Layer (Corning Cat. No. 3264)

Table 1. Different CellCube® Culture Modules

Cat. No.	Description	Surface Area	Surface Area Equal to		CellCube Seeding Volume	Qty/Cs
			Roller Bottle*	Flask**		
3200	CellCube Modules (10)	8,500 cm ²	10	114	0.6 L	2
3201	CellCube Modules (25)	21,250 cm ²	25	284	1.5 L	1
3264	CellCube Modules (100)	85,000 cm ²	100	1,134	6.0 L	1

*Roller bottle from 850 cm² roller bottles (Cat. No. 3907)

**Flask 75 cm² flasks (Cat. No. 430198)

Figure 14-18. CellCube Culture Module Flow Progression



Figure 14.



Figure 15.



Figure 16.



Figure 17.



Figure 18.