Captions of Tables and Figures

Table 1. Specifications of fiber optic sensors for cure monitoring.
(Kang H K, Kang D H, Bang H J, Hong C S, and Kim C G)

Specifications		Gage length	Bragg wave-length	Initial cavity length	CTE optical fiber	Thermo -optic coeff.
Symbol		L	λ_B	d_o	α_f	ξ_f
Unit		*mm*	*nm*	*μm*	*ppm/℃*	*ppm/℃*
Unidirectional laminate $[0_{12}/\{0,90\}/0_{12}]_T$	Sensor 1	24.3	1532.003	664.56	0.5	6.2
	Sensor 2	24.5	1532.441	642.66		
Sym. cross-ply laminate $[0_3/\{0\}/0_3/90_6/\{90\}/90_6/0_6]_T$	Sensor 3	24.8	1532.050	660.55	0.5	6.2
	Sensor 4	23.9	1532.070	680.55		
Fabric laminate $[Fabric_8/\{0,90\}/Fabric_8]_T$	Sensor 5	25.6	1536.135	587.53	0.5	6.2
	Sensor 6	24.0	1536.201	633.87		

Table 2. Components of characteristic matrices of fiber optic sensors for cure monitoring.
(Kang H K, Kang D H, Bang H J, Hong C S, and Kim C G)

Symbol		$P_{1\varepsilon}$	$P_{2\varepsilon}$	P_{1T}	P_{2T}
Unit		*με/μm*	*με/nm*	*℃/μm*	*℃ /nm*
Unidirectional laminate $[0_{12}/\{0,90\}/0_{12}]_T$	Sensor 1	41.15	47.38	0	97.42
	Sensor 2	40.82	47.42	0	97.40
Sym. Cross-ply laminate $[0_3/\{0\}/0_3/90_6/\{90\}/90_6/0_6]_T$	Sensor 3	40.32	47.41	0	97.42
	Sensor 4	41.84	47.32	0	97.42
Fabric laminate $[Fabric_8/\{0,90\}/Fabric_8]_T$	Sensor 5	39.06	47.47	0	97.16
	Sensor 6	41.67	47.30	0	97.16

Table 3. Compressive strains during cool-down period.

(Kang H K, Kang D H, Bang H J, Hong C S, and Kim C G)

Laminate	Sensor	Compressive strain
Unidirectional laminate $[0_{12}/\{0,90\}/0_{12}]_T$	Sensor 1	– 40 με
	Sensor 2	– 4200 με
Sym. cross-ply laminate $[0_3/\{0\}/0_3/90_6/\{90\}/90_6/0_6]_T$	Sensor 3	– 280 με
	Sensor 4	– 380 με
Fabric laminate $[Fabric_8/\{0,90\}/Fabric_8]_T$	Sensor 5	– 360 με
	Sensor 6	– 350 με
Unsym. cross-ply laminate [20] $[0_6/\{0\}/0_6/90_6/\{90\}90_6]_T$	Sensor 7	– 330 με
	Sensor 8	– 320 με

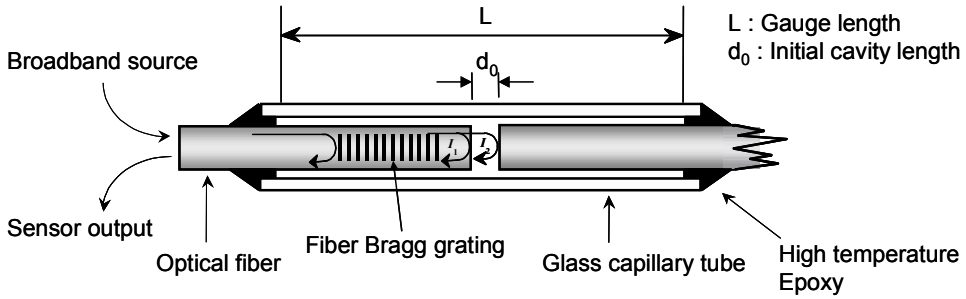


Figure 1. FGB/EFPI hybrid sensor.
(Kang H K, Kang D H, Bang H J, Hong C S, and Kim C G)

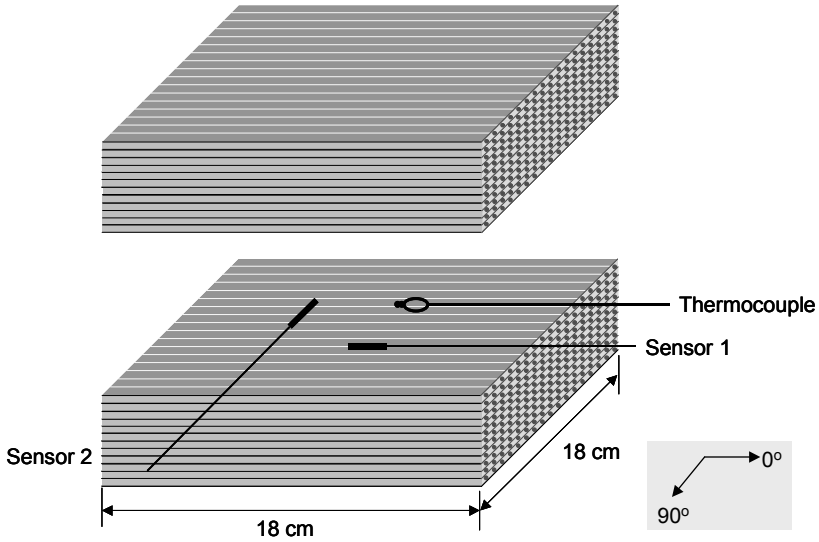


Figure 2. Directions and locations of fiber optic sensors embedded in a unidirectional laminate.
(Kang H K, Kang D H, Bang H J, Hong C S, and Kim C G)

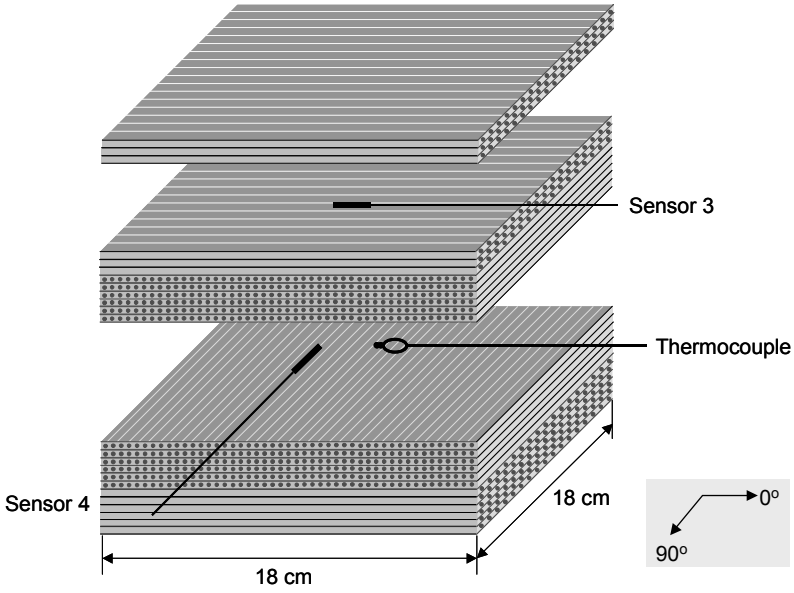


Figure 3. Directions and locations of fiber optic sensors embedded in a symmetric cross-ply laminate.
(Kang H K, Kang D H, Bang H J, Hong C S, and Kim C G)

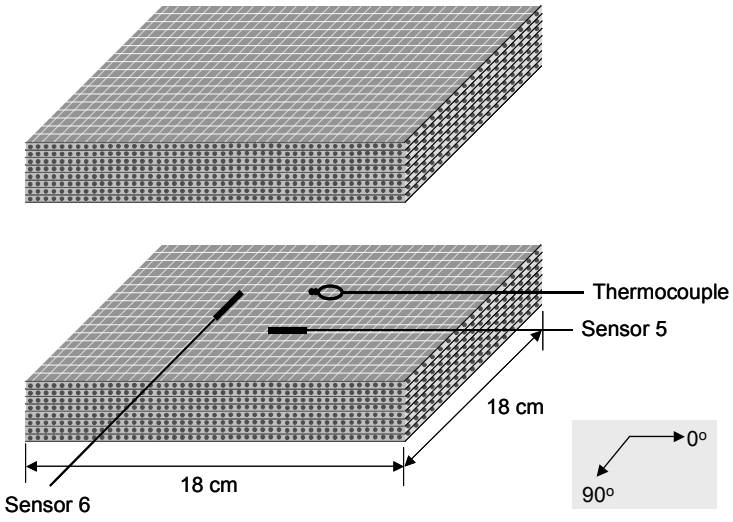


Figure 4. Directions and locations of fiber optic sensors embedded in a symmetric cross-ply laminate.
(Kang H K, Kang D H, Bang H J, Hong C S, and Kim C G)

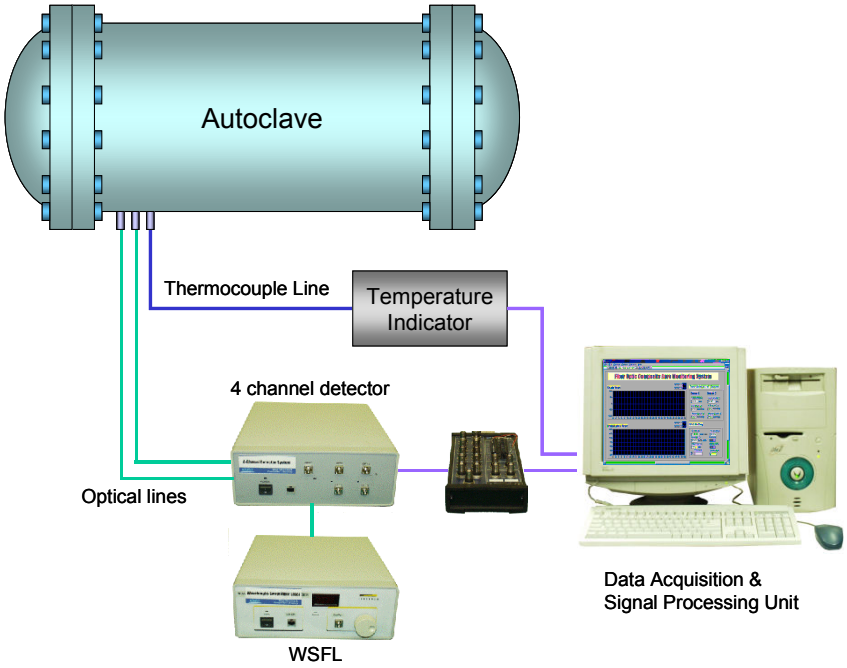


Figure 5. Experimental set-up for cure monitoring.
(Kang H K, Kang D H, Bang H J, Hong C S, and Kim C G)

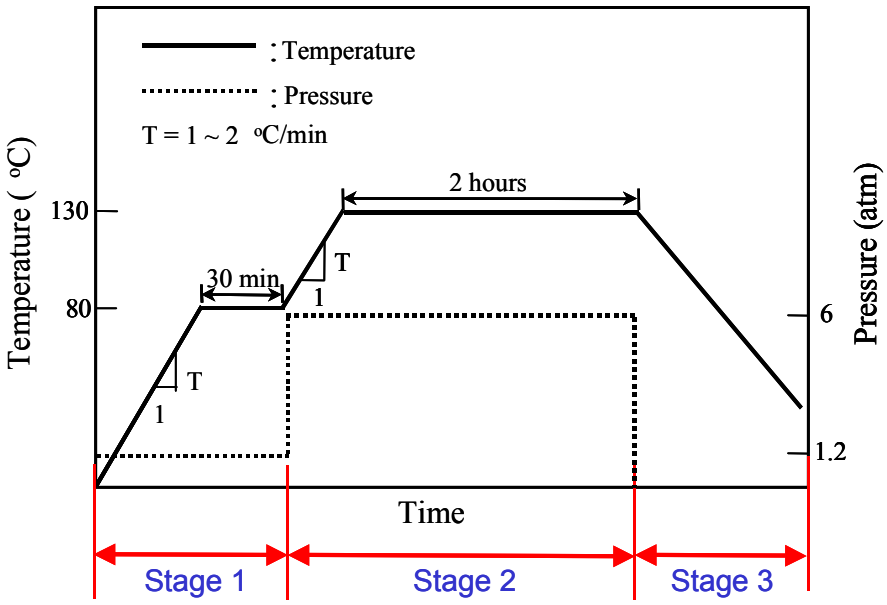
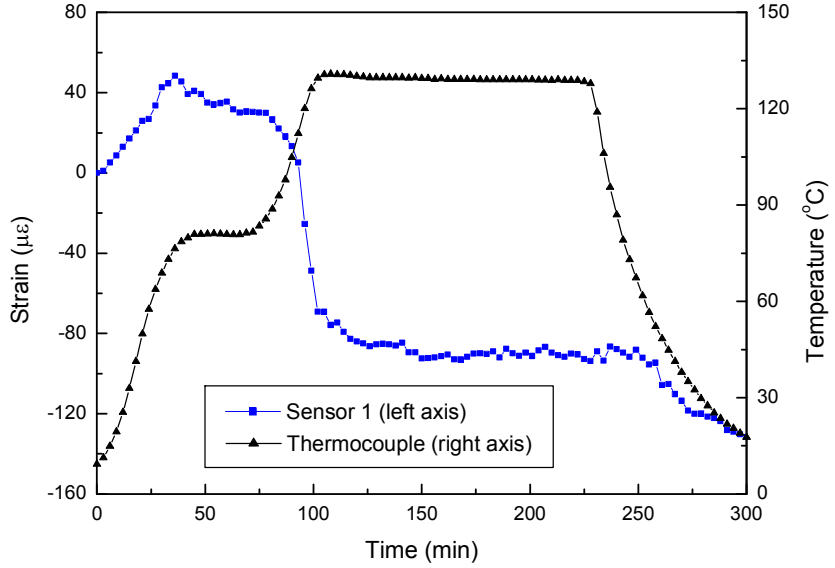
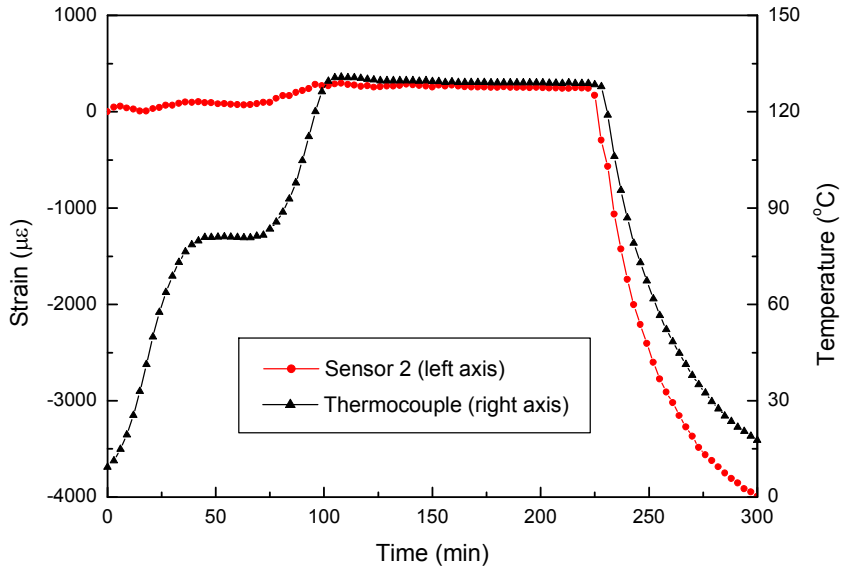


Figure 6. Curing cycle of graphite/epoxy composite in the autoclave molding.
(Kang H K, Kang D H, Bang H J, Hong C S, and Kim C G)



(a) Strain measured by sensor 1.



(b) Strain measured by sensor 2.

Figure 7. Strain measurement during cure process of a unidirectional laminate. (Kang H K, Kang D H, Bang H J, Hong C S, and Kim C G)

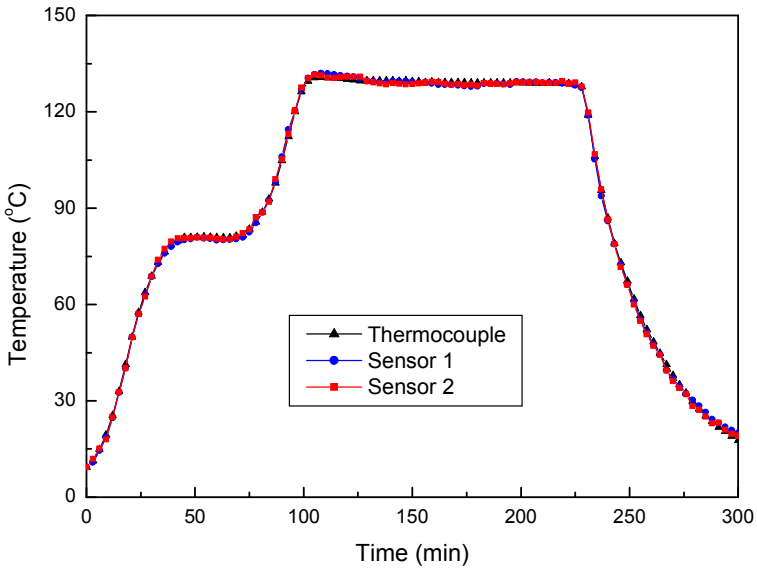
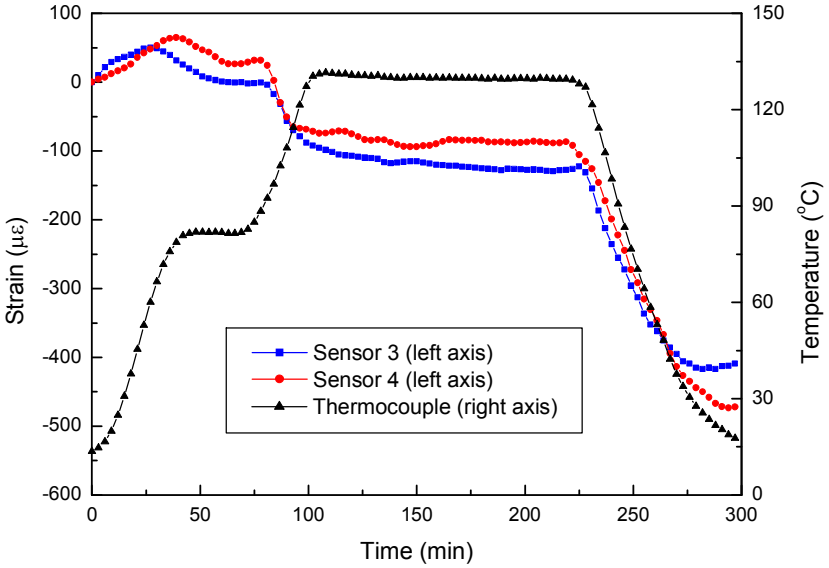
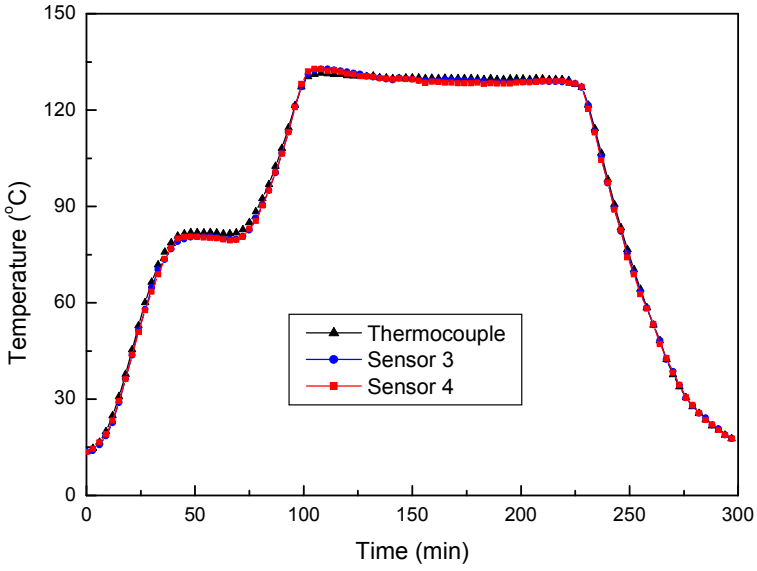


Figure 8. Temperature measurement of a unidirectional laminate.
(Kang H K, Kang D H, Bang H J, Hong C S, and Kim C G)

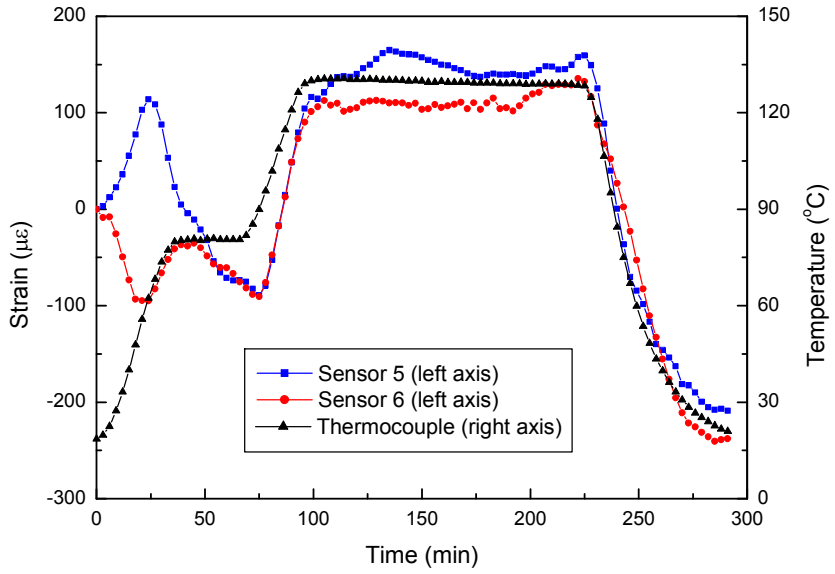


(a) Strain measurement.

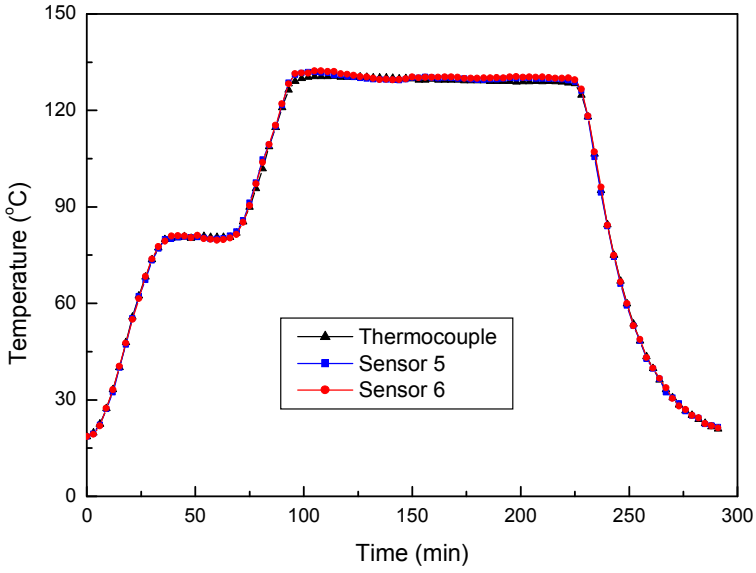


(b) Temperature measurement.

Figure 9. Strain and temperature measurement of a symmetric cross-ply laminate. (Kang H K, Kang D H, Bang H J, Hong C S, and Kim C G)



(a) Strain measurement.



(b) Temperature measurement.

Figure 10. Strain and temperature measurement of a fabric laminate. (Kang H K, Kang D H, Bang H J, Hong C S, and Kim C G)